PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
RRV1317

STEREO MULTI-PLAY CD CASSETTE DECK RECEIVER

XR-P4500M

- **Refer to the service manual RRV1207 for XR−P5500M/KU.**

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	XR−P4500M		
SL	○	AC110−115V/120V/220−230V/240V	With the voltage selector

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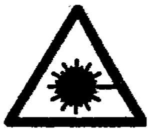
1. SAFETY INFORMATION

(FOR EUROPEAN MODEL ONLY)

VARO !
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

ADVERSEL:
USYNLIG LASERSTRALING VED ABNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGA UDSAETTELSE FOR STRALING.

VARNING !
OSYNLIG LASERSTRALNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRALEN.

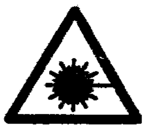


LASER
Kuva 1
Lasersateilyn varoitusmerkki

WARNING !
DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.

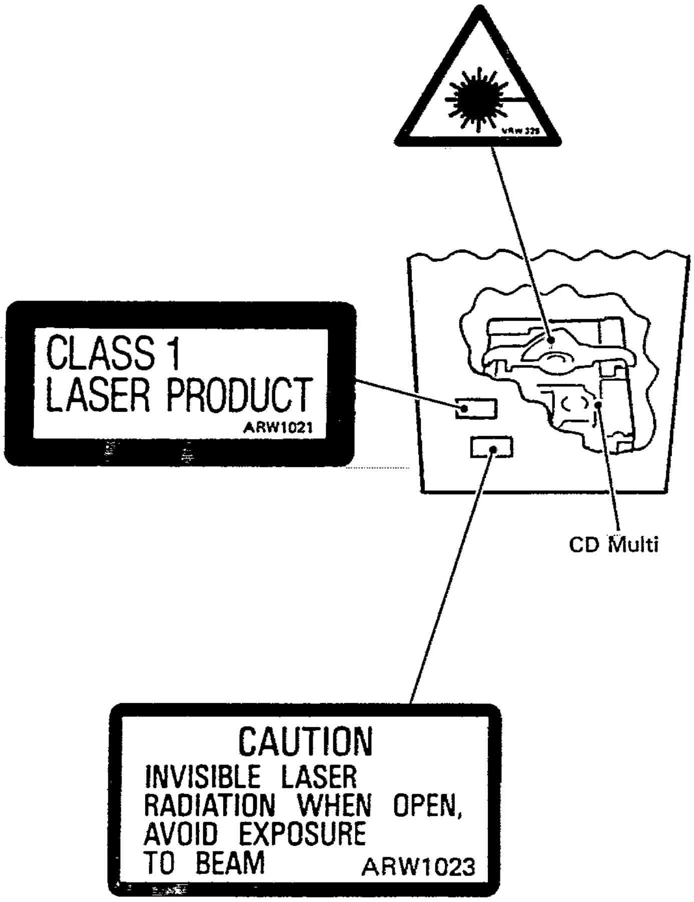
IMPORTANT
THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 5 mw
WAVELENGTH: 780 - 785 nm



LASER
Picture 1
Warning sign for laser radiation

LABEL CHECK



Additional Laser Caution

1. Laser Interlock Mechanism
   The ON/OFF (ON : low level, OFF : high level) status of S601 (LPS1) and S602 (LPS2) switches for detecting the loading state is detected by the system microprocessor, and the design prevents laser diode oscillation except when both switches S601 and S602 are ON (low level or clamped state).
   Thus, interlock will no longer function if switches S601 (LPS1) and S602 (LPS2) are deliberately shorted (low level).
   The interlock also does not function in the test mode*.
   Laser diode oscillation will continue, if pin 1 of M51593FP (IC101) on the PRE-AMP BOARD ASSY mounted on the pickup assembly is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).
2. When the cover is opened with the servo mechanism block removed and turned over, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

'92M1B

* *Refer to page 74 in the service manual RRV1207.*

2. CONTRAST OF MISCELLANEOUS PARTS

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

$560\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ ……………… *RD1/8PM* $\boxed{5}\boxed{6}\boxed{1}$ *J*
$47k\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ ……………… *RD1/4PS* $\boxed{4}\boxed{7}\boxed{3}$ *J*
$0.5\Omega \rightarrow 0R5$ ……………… *RN2H* $\boxed{0}\boxed{R}\boxed{5}$ *K*
$1\Omega \rightarrow 010$ ……………… *RS1P* $\boxed{0}\boxed{1}\boxed{0}$ *K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62k\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ ……………… *RM1/4PC* $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ *F*

XR−P4500M/SL and XR−P5500M/KU have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		XR−P5500M/KU	XR−P4500M/SL	
	AF ass'y	AWK7108	AWK7107	
	AF CD assy	AWZ7544	AWZ7543	
	VR assy	AWZ7551	AWZ7550	
NSP	HEADPHONE assy	AWZ7555	AWZ7554	＊1
NSP	COMPLEX ass'y	AWM7147	AWM7146	
	DISPLAY assy	AWZ7525	AWZ7523	
	PRIMARY assy	AWZ7535	AWZ7533	
	CASSETTE MOD. B	EXK2435	EXK2415	＊2
⚠	S1 Voltage selector	Not used	AKX−507	
⚠	T8005 Power transformer (AC120V)	ATS7039	Not used	
⚠	T8005 Power transformer (AC110−115V/120V/220−230V/240V)	Not used	ATS7041	＊3
⚠	FU1 Fuse (6.3A/125V)	AEK−309	Not used	
⚠	FU1 Fuse (T5A/250V)	Not used	AEK−515	
⚠	FU2, FU3 Fuse (T2.5A/250V)	Not used	AEK−512	
⚠	AC power cord	ADG1146	ADG1131	
	Cord stopper	AEP−113	AEC−882	
NSP	Front panel assy	AMB7217	AMB7216	
	Front panel	AMB7213	AMB7154	
	Rear panel	ANC7143	ANC7142	
	Bonnet	ANE7045	ANE7044	
	Packing case	AHD7081	AHD7080	
	65 label	ORW1069	Not used	
	Caution label (G)	Not used	VRW−329	Refer to page 2.
NSP	Caution label (F)	Not used	ARW1021	
NSP	Caution label	Not used	ARW1023	
	Operating instructions (Spanish/Chinese)	Not used	ARC7030	

Notes ＊1: Although AWZ7554 and AWZ7555 are different in part number, they consist of the same component.
＊2: For EXK2415, refer to page 88 in the service manual RRV1207.
＊3: Refer to "3.2 AF CD ASSY, PRIMARY ASSY AND ADJACENCIES TO THE POWER TRANSFORMER".

AF CD Assy

AWZ7543 and AWZ7544 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7544	AWZ7543	
	C1001, C1002 (4700μF/71V)	ACH1249	Not used	
	C1001, C1002 (4700μF/63V)	Not used	ACH7007	
	C1311	Not used	CKCYF473Z50	*4
	C1312	Not used	CKSQYF473Z50	*4
	C1351－C1353	Not used	CKSQYF102Z50	*4
	C8301, C8477	CKSQYF104Z50	Not used	
	C1501, C1502	CEAS2R2M50	CEASR15M50	
	R1224	RS1LMF472J	RS1LMF272J	
	CN2102 Pin jack 2P	Not used	AKB1100	*4

*Note *4: Refer to "3.2 AF CD ASSY, PRIMARY ASSY AND ADJACENCIES TO THE POWER TRANSFORMER".*

VR Assy

AWZ7550 and AWZ7551 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7551	AWZ7550	
	C1511	CKPUYX182M16	CKPUYF104Z50	
	C1555, C1556	CKSQYF104Z50	CKSQYB473K50	
	C1557, C1558	CKSQYB333K50	CKSQYB393K50	
	R1505, R1506	RS1/10S104J	RS1/10S473J	
	R1555－R1558	RS1/10S563J	RS1/10S104J	

DISPLAY Assy

AWZ7523 and AWZ7525 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7525	AWZ7523	
	D1819	Not used	HSS104－02	*5

*Note *5: Refer to "3.1 DISPLAY ASSY".*

PRIMARY Assy

AWZ7533 and AWZ7535 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7535	AWZ7533	
	L1101	ATF1136	ATF－151	
	R1101 (2.2M, 1/2W)	ACN－208	Not used	
	H1103－H1106	Not used	AKR1003	*6
⚠NSP	Y1103	Not used	ADX1980	*6

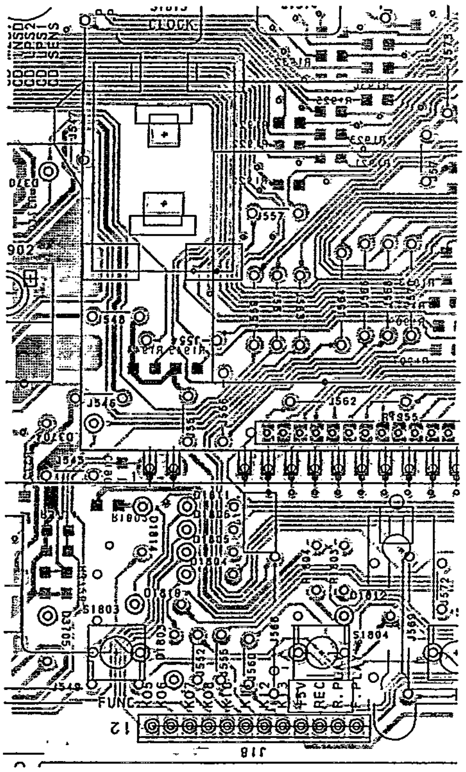
*Note *6: Refer to "3.2 AF CD ASSY, PRIMARY ASSY AND ADJACENCIES TO THE POWER TRANSFORMER".*

3. SCHEMATIC AND PCB DIAGRAMS

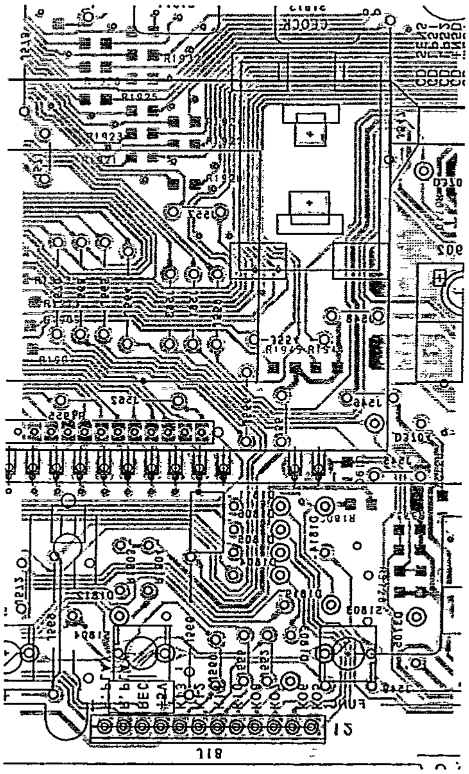
3.1 DISPLAY ASSY

Note: For Display assy, only the differences between AWZ7523 and AWZ7525 are shown.

DISPLAY ASSY


CLOCK
J557
J546
J562
R1955
S1803
S1804
FUNC
J18
902

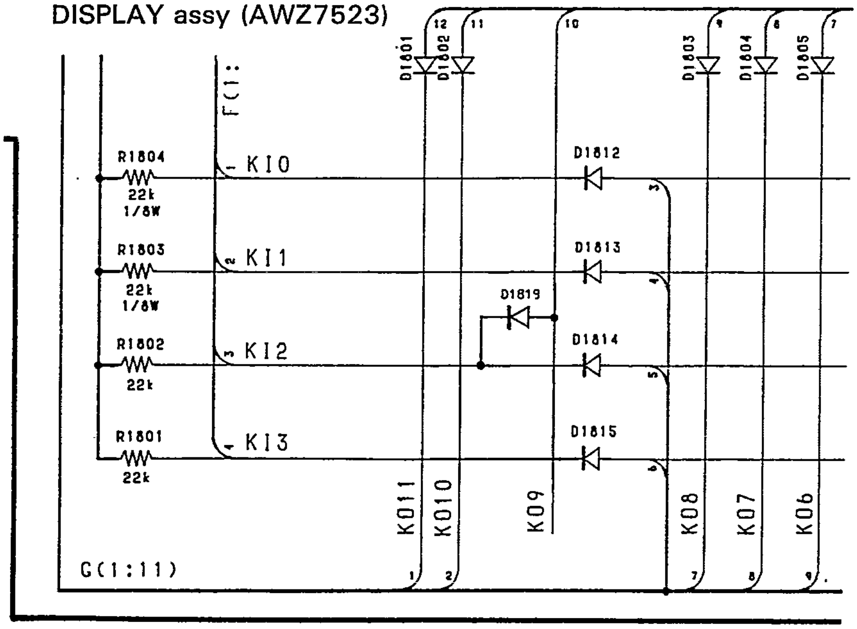
- This diagram is viewed from the mounted parts side.


CLOCK
J557
J562
S1810
J18
902

- This diagram is viewed from the foil side.

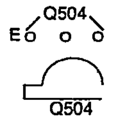
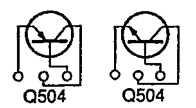
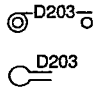
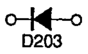
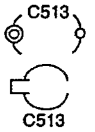
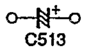
SCH-1F

DISPLAY assy (AWZ7523)


D1801
D1802
D1803
D1804
D1805
D1812
D1813
D1814
D1815
D1819
R1804
22k
1/8W
R1803
22k
1/8W
R1802
22k
R1801
22k
KI0
KI1
KI2
KI3
KO11
KO10
KO9
KO8
KO7
KO6
F(1:
G(1:11)
1
2
3
4
5
6
7
8
9
10
11
12

NOTE FOR PCB DIAGRAMS:

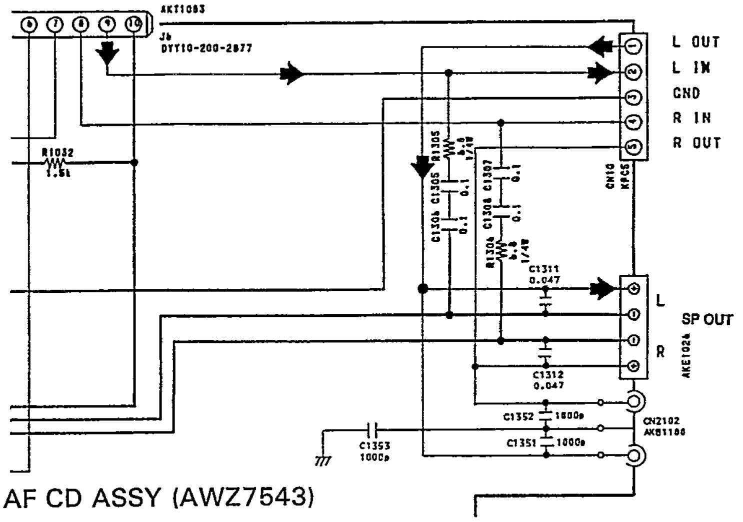
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

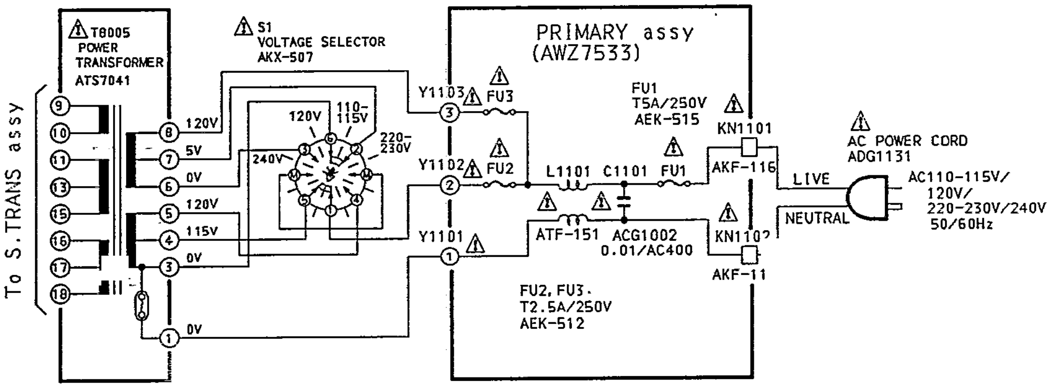
3. The transistor terminal marked with E or ⊏ shows the emitte
4. The diode terminal marked with ◎ or ⊂ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.

3.2 AF CD ASSY, PRIMARY ASSY AND ADJACENCIES TO THE POWER TRANSFORMER

Note: For AF CD assy, only the differences between AWZ7543 and AWZ7544 are shown.

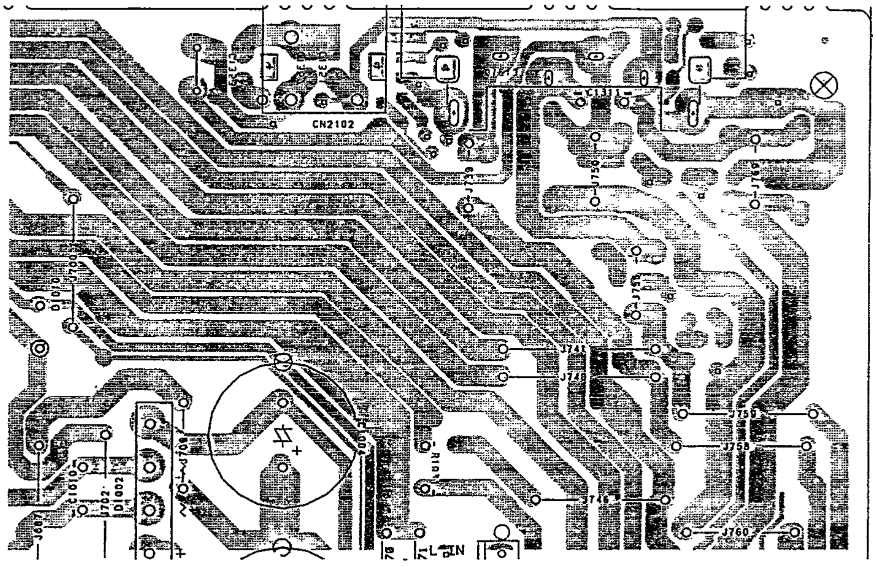

AKT1083
J6
DYY10-200-2877
R1032
1.5k
L OUT
L IN
GND
R IN
R OUT
CN10
KPCS
R1305
6.8
1/4W
C1306
C1305
0.1
0.1
C1308
C1307
0.1
0.1
R1306
6.8
1/4W
C1311
0.047
L
SP OUT
R
AKE1026
C1312
0.047
C1352
1800p
C1351
1000p
C1353
1000p
CN2102
AKB1186

AF CD ASSY (AWZ7543)

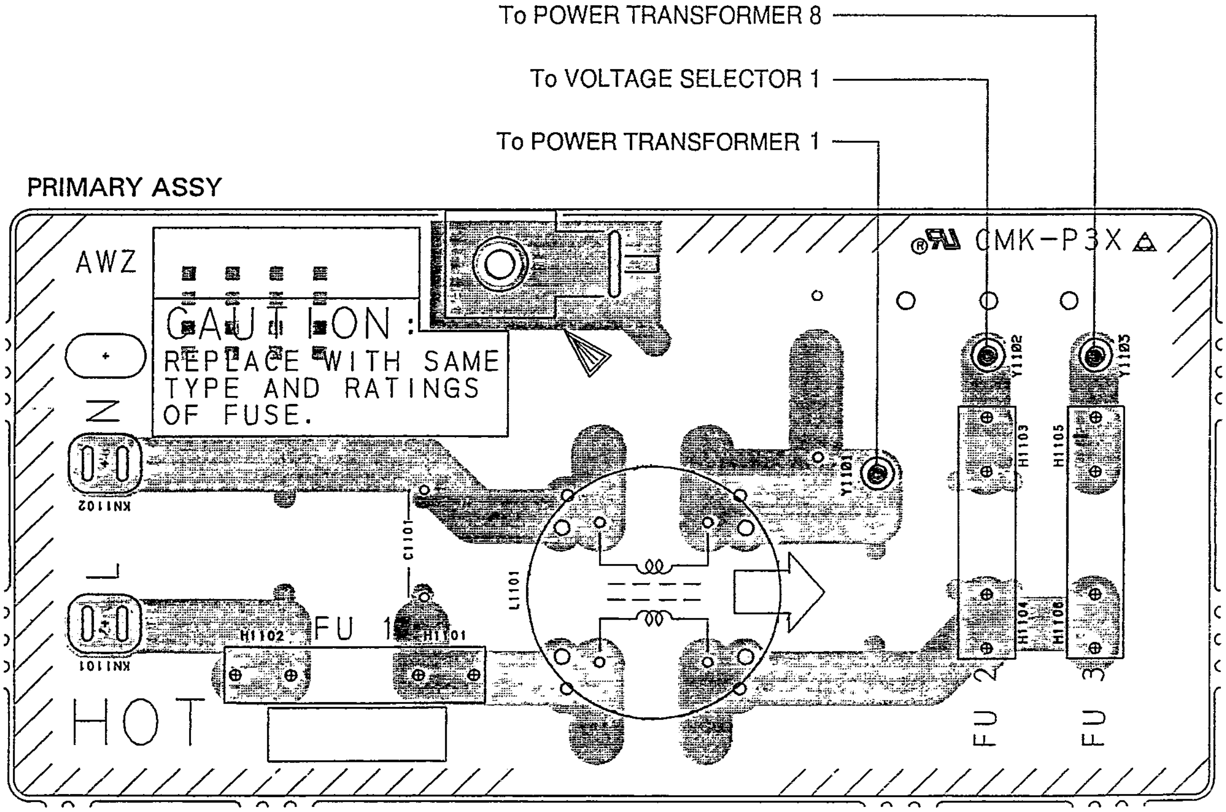

T8005
POWER
TRANSFORMER
ATS7041
S1
VOLTAGE SELECTOR
AKX-507
To S.TRANS assy
9
10
11
13
15
16
17
18
8
7
6
5
4
3
1
120V
5V
0V
120V
115V
0V
0V
120V
110-
115V
220-
230V
240V
PRIMARY assy
(AWZ7533)
Y1103
Y1102
Y1101
FU3
FU2
L1101
C1101
FU1
FU1
T5A/250V
AEK-515
KN1101
AKF-116
KN1102
AKF-11
ATF-151
ACG1002
0.01/AC400
FU2, FU3.
T2.5A/250V
AEK-512
AC POWER CORD
ADG1131
LIVE
NEUTRAL
AC110-115V/
120V/
220-230V/240V
50/60Hz

- This diagram is viewed from the mounted parts side.

AF CD ASSY


CN2102
C1311
J739
J750
J769
J700
D1010
J741
J740
J759
J758
J745
J760
R1011
D1002
J702
C1010
J709

PRIMARY ASSY


To POWER TRANSFORMER 8

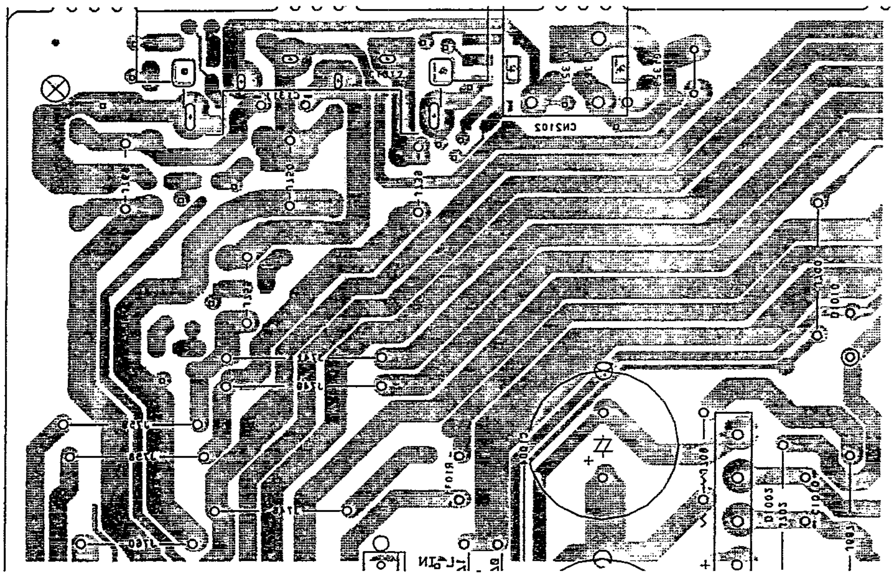
To VOLTAGE SELECTOR 1

To POWER TRANSFORMER 1

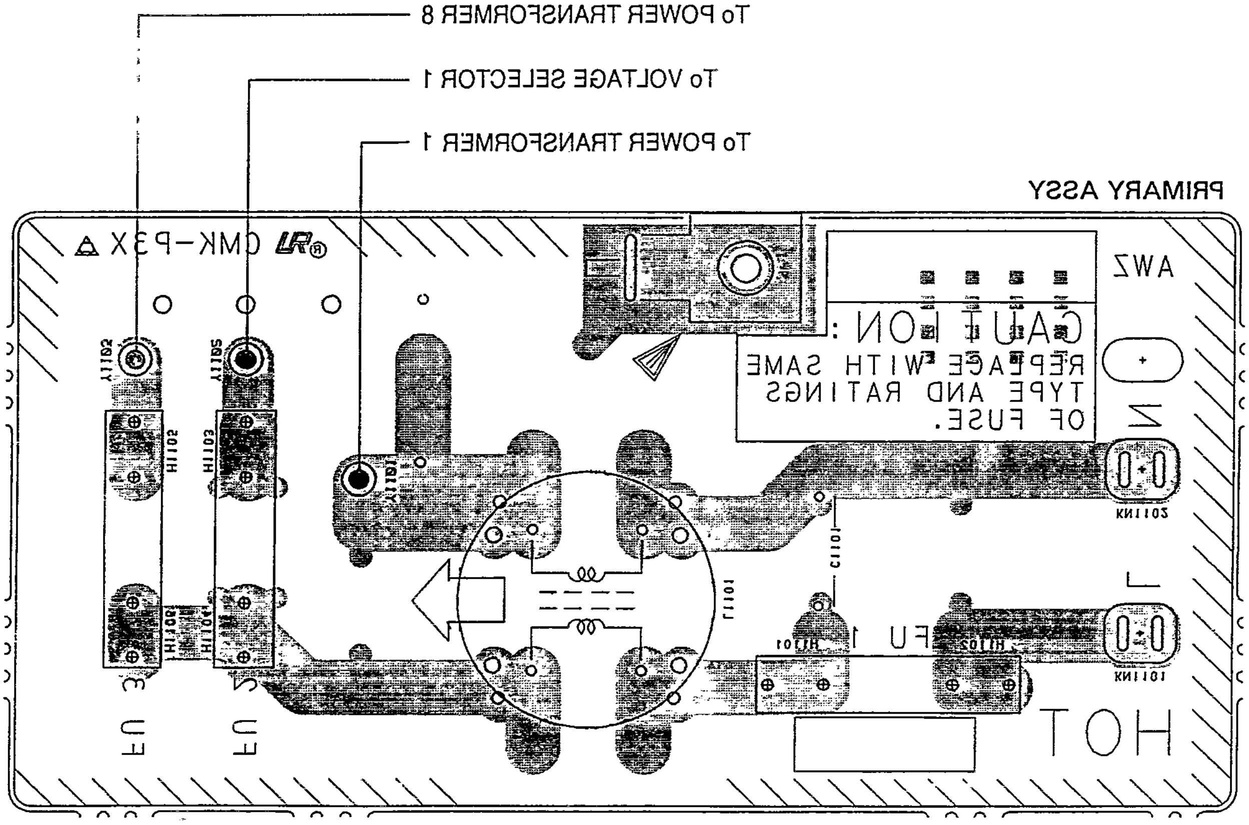
AWZ
CAUTION :
REPLACE WITH SAME
TYPE AND RATINGS
OF FUSE.
CMK−P3X
N
KN1102
L
KN1101
H1102
FU 1
H1101
C1101
L1101
Y1101
Y1102
Y1103
H1103
H1104
H1105
H1106
FU 2
FU 3
HOT

- This diagram is viewed from the foil side.

AF CD ASSY



PRIMARY ASSY


To POWER TRANSFORMER 8
To VOLTAGE SELECTOR 1
To POWER TRANSFORMER 1
CMK-P3X
AWZ
CAUTION :
REPLACE WITH SAME
TYPE AND RATINGS
OF FUSE.
FU 1
FU 2
FU 3
HOT
KN1101
KN1102
H1101
H1102
H1103
H1104
H1105
L1101
C1101

Service Manual

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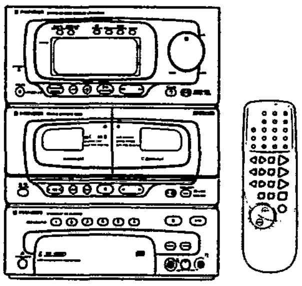

ORDER NO.
RRV1207

STEREO MULTI-PLAY CD CASSETTE DECK RECEIVER

XR-P5500M

XR-P4500M

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	Remarks
	XR−P5500M	XR−P4500M		
KU	○	○	AC120V	
KC	○	○	AC120V	

● **For the following: XR−P5500M/KC; XR−P4500M/KU and KC, refer to page 87.**

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

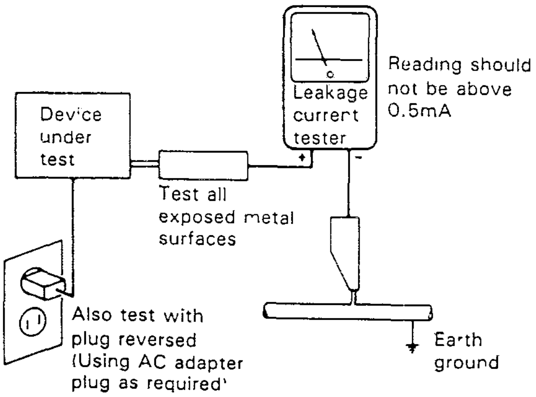
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Device under test
Leakage current tester
Reading should not be above 0.5mA
+
-
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a △ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS, PACKING AND PARTS LIST

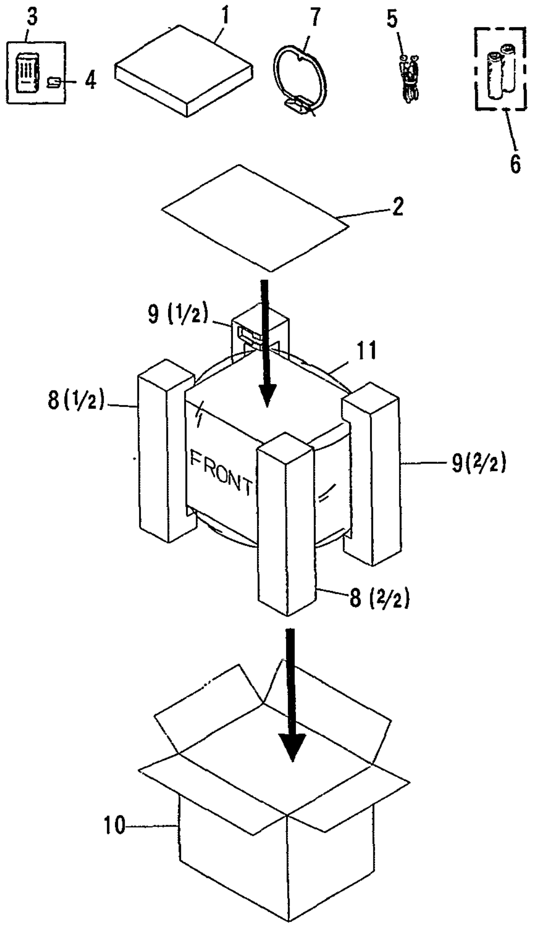
NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 PACKING

Parts List of Packing

Mark	No.	Description	Parts No.
	1	MAGAZINE ASSY	PXA1549
	2	OPERATING INSTRUCTIONS (English)	ARB7021
	3	REMOTE CONTROL UNIT (CU−XR016)	AXD7037
	4	BATTERY COVER	AZA7050
	5	FM ANTENNA	ADH1016
NSP	6	BATTERY (R03, AAA)	AEX−021
	7	LOOP ANTENNA (L8043)	ATB1012
	8	FRONT PAD LR	AHA7038
	9	REAR PAD LR	AHA7043
	10	PACKING CASE	AHD7081
	11	SHEET	AHG7003

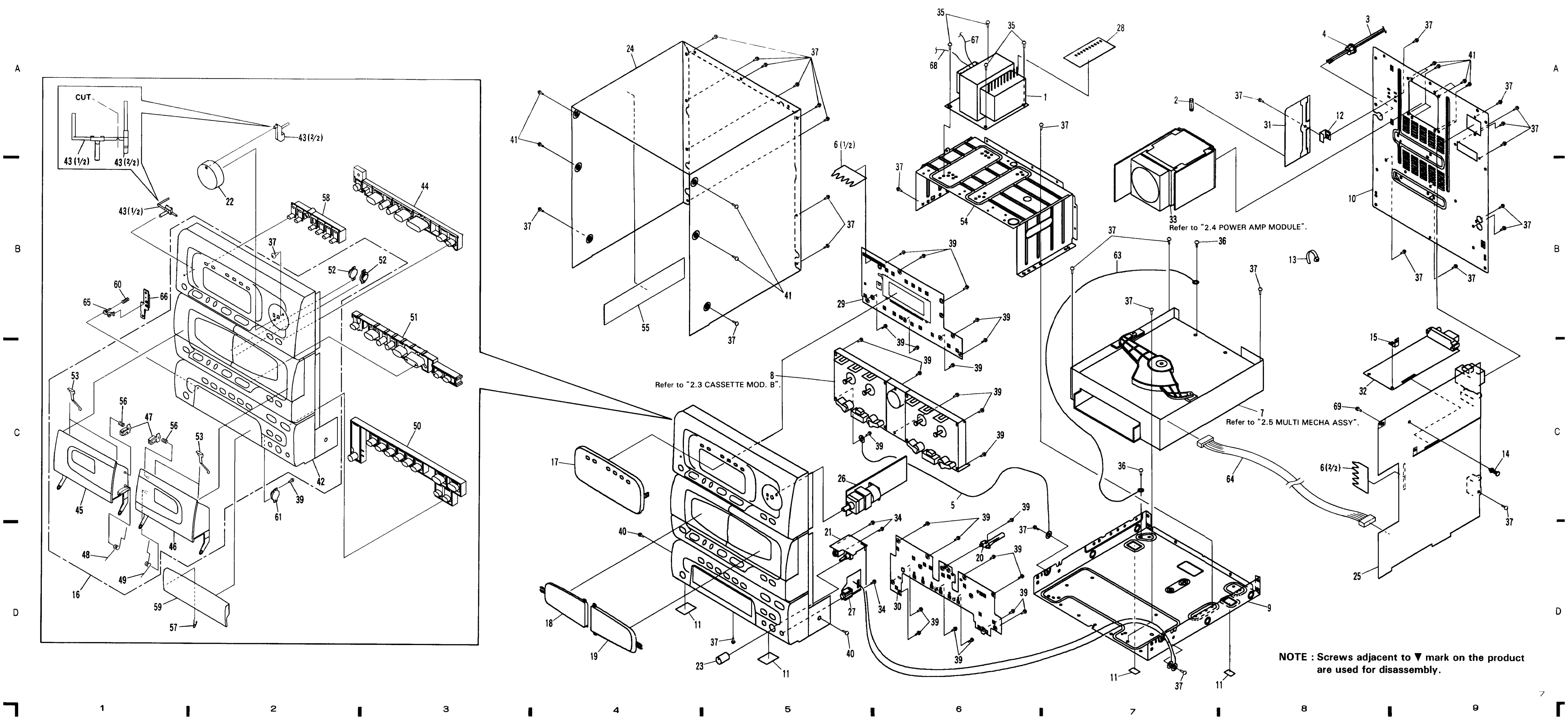


2.2 EXTEIOR

Parts List of Exterior

Mark	No.	Description	Parts No.
⚠	1	POWER TRANSFORMER	ATS7039
⚠	2	FUSE (6.3A/125V, FU1)	AEK−309
⚠	3	AC POWER CORD	ADG1146
	4	CORD STOPPER	AEP−113
NSP	5	GROUND LEAD	ADB1001
⚠	6	FLEXIBLE CABLE (J1)	ADD1127
	7	MULTI MECHA ASSY	AXA7006
	8	CASSETTE MOD. B	EXK2435
NSP	9	CHASSIS	ANA7001
	10	REAR PANEL	ANC7143
	11	RUBBER SHEET	AEB1111
	12	BRACKET	ANG7002
	13	NYLON BINDER	AEC−093
	14	PCB SPACER (3×12)	AEC1372
	15	PCB CONNECTOR (PVC)	AEC1500
NSP	16	FRONT PANEL ASSY	AMB7217
	17	AMPLIFIER PLATE	AAK7111
	18	DECK PLATE L	AAK7112
	19	DECK PLATE R	AAK7113
	20	SUPPORT ROD	AMR7034
	21	MIC ASSY	AWZ7539
	22	VOL KNOB	AAB7039
	23	MIC VOL KNOB	AAB7040
	24	BONNET	ANE7045
	25	AF CD ASSY	AWZ7544
	26	VR ASSY	AWZ7551
	27	HEADPHONE ASSY	AWZ7555
	28	S. TRANS ASSY	AWZ7557
	29	DISPLAY ASSY	AWZ7525
	30	SW ASSY	AWZ7537
	31	PRIMARY ASSY	AWZ7535
	32	FM/AM TUNER MODULE	AXQ1012
	33	POWER AMP MODULE	AXQ7017
	34	SCREW (P2.6×8)	ABA1005
	35	SCREW	ASZ40P060FMC
	36	SCREW	BBZ30P060FMC
	37	SCREW	BBZ30P080FZK
	38	………………	
	39	SCREW	VPZ30P080FMC
	40	SCREW	CBZ30P080FMC
	41	SCREW	VPZ30P080FZK
	42	FRONT PANEL	AMB7213
	43	STA. LENS	AAK7099
	44	FUNCTION BUTTON	AAD7151
	45	DOOR−L	AAN7065

Mark	No.	Description	Parts No.
	46	DOOR−R	AAN7066
	47	LATCH MOLD	AEC7016
	48	DOOR SPRING (L)	ABH7046
	49	DOOR SPRING (R)	ABH7047
	50	CD BUTTON	AAD7153
	51	DECK BUTTON	AAD7154
	52	DAMPER ASSY	AXA7021
	53	KEEP PLATE	ABK7001
	54	TRANS FRAME	ANA7002
	55	65 LABEL	ORW1069
	56	LATCH SPRING	ABH7039
	57	DOOR SPRING	ABH7038
	58	TIMER BUTTON	AAD7152
	59	MULTI DOOR	AAN7048
	60	LOCK LEVER SPRING	ABH7004
	61	DAMPER ASSY	AXA7021
	62	………………	
	63	GROUND LEAD	ADB1005
NSP	64	PARALLEL WIRE (J2)	D20PYY0615E
	65	LOCK LEVER	AEC7015
	66	SUPPORT PLATE	AMR7033
NSP	67	WIRE	YJ6HW0−30−35/35
NSP	68	WIRE	YJ6HW8−30−35/35
	69	NYLON RIVET	AEC−525


CUT
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43(2/2)
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6(2/2)
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Refer to "2.3 CASSETTE MOD. B".

Refer to "2.4 POWER AMP MODULE".

Refer to "2.5 MULTI MECHA ASSY".

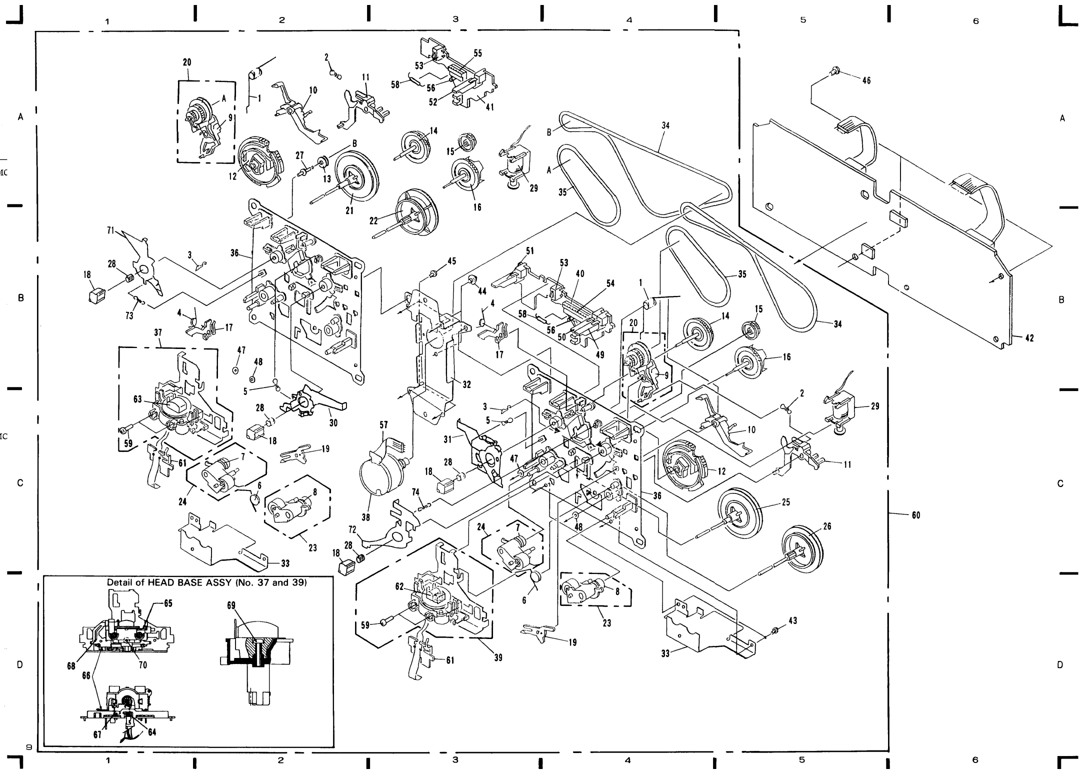
NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.

2.3 CASSETTE MOD. B

Parts List of Cassette Mod. B

Mark	No.	Description	Parts No.
	1	SPRING	EBH1467
	2	SPRING	EBH1475
	3	SPRING	EBL1023
	4	SPRING	EBH1478
	5	SPRING	EBH1483
	6	SPRING	EBH1472
	7	SPRING	EBH1496
	8	SPRING	EBH1495
	9	ARM	ENV1431
	10	BRAKE	ENV1395
	11	ARM	ENV1394
	12	GEAR	ENV1393
	13	PULLEY	ENV1291
	14	REEL	ENV1385
	15	GEAR	ENV1383
	16	REEL	ENV1384
	17	ARM	ENV1400
	18	REEL COLLAR UNIT	EXA1400
	19	ARM	ENV1403
	20	LIMITER UNIT	EXA1349
	21	FLYWHEEL UNIT	EXA1330
	22	FLYWHEEL UNIT	EXA1329
	23	ROLLER UNIT	EXA1352
	24	ROLLER UNIT	EXA1353
	25	FLYWHEEL UNIT	EXA1322
	26	FLYWHEEL UNIT	EXA1321
	27	SHAFT	ELA1332
	28	SPRING	EBH1468
	29	SOLENOID	EXP1011
	30	ARM UNIT	EXA1372
	31	ARM UNIT	EXA1371
	32	BRACKET	ENC1357
	33	BRACKET	AZN7094
	34	BELT	ENT1033
	35	BELT	ENT1032
	36	CHASSIS UNIT	EXA1348
	37	HEAD BASE ASSY	EXX1036
	38	MOTOR ASSY	EXX1030
	39	HEAD BASE ASSEMBLY	EXX1035
	40	SUB COMPLEX PCB	ENX1032
	41	SUB COMPLEX PCB	ENX1031
	42	DECK UNIT	EWM1005
	43	SCREW	BSL20P040FMC
	44	SCREW	PMS26P025FUC
	45	SCREW	BSL20P030FMC

Mark	No.	Description	Parts No.
	46	SCREW	ATZ26P080FMC
	47	WASHER	EBF1028
	48	WASHER	EBF1027
	49	SWITCH (AR−R)	ESN1009
	50	SWITCH (CrO2)	ESN1009
	51	SWITCH (AR−F)	ESN1009
	52	SWITCH (CrO2)	ESN1009
	53	SWITCH (HALF)	ESG1003
	54	CONNECTOR (15P)	EKS1012
	55	CONNECTOR (8P)	EKS1020
	56	PHOTO INTERRUPTER	ON1004
	57	LEAD WIRE	EDD1012
	58	RESISTOR	ERD25T561S
	59	SCREW (For AZIMUTH)	EBA1034
	60	CASSETTE MECHA UNIT	EXA1408
	61	SPRING	EBL1019
	62	HEAD UNIT	EXA1316
	63	HEAD UNIT	EXA1317
	64	SPRING	EBH1473
	65	SPRING	EBH1474
	66	SPRING	EBH1476
	67	SPRING	EBH1479
	68	LEVER	ENC1349
	69	SCREW	EBA1035
	70	SCREW	BBZ20P060FMC
	71	ARM	ENC1402
	72	ARM	ENC1403
	73	SPRING	EBH1525
	74	SPRING	EBH1526



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Detail of HEAD BASE ASSY (No. 37 and 39)
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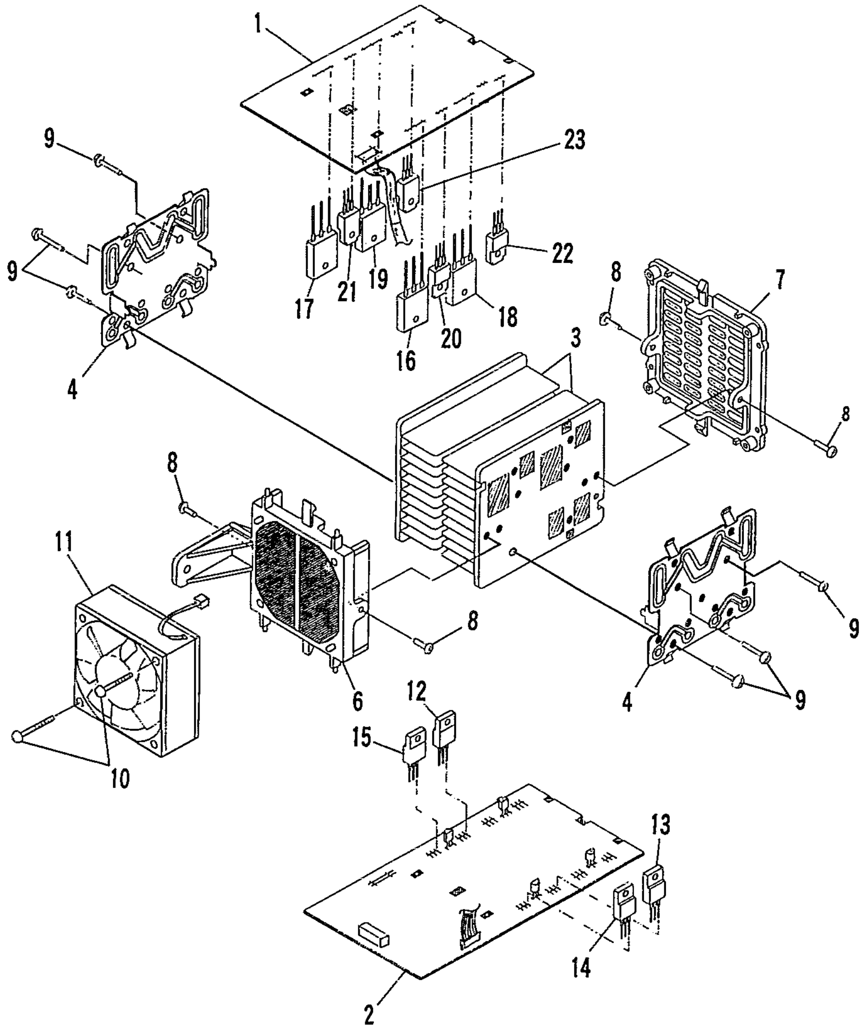
2.4 POWER AMP MODULE



Note: Ensure that silicon grease does not adhere to the MOLD A (No. 6) and MOLD B (No. 7).

Parts List of Power Amp Module

Mark	No.	Description	Parts No.
	1	FRONT 100W ASSY	AWZ7518
	2	REGULATOR ASSY	AWZ7520
	3	HEAT SINK (AL)	ANH7007
	4	BRACKET	ANG1868
	5	………………	
	6	MOLD A	AMR2594
	7	MOLD B	AMR2595
	8	SCREW (3 × 10)	ABA1021
	9	SCREW	BBZ30P140FZK
	10	SCREW	BPZ30P350FZK
	11	FAN MOTOR	AXM7003
	12	REGULATOR IC (IC7401)	NJM7812FAS

Mark	No.	Description	Parts No.
	13	REGULATOR IC (IC7402)	NJM7912FA
	14	REGULATOR IC (IC7403)	NJM7812FAS
	15	REGULATOR IC (IC7404)	NJM7805FAS
⚠	16	TRANSISTOR (Q7511)	2SA1264N
⚠	17	TRANSISTOR (Q7512)	2SA1264N
⚠	18	TRANSISTOR (Q7513)	2SC3181N
⚠	19	TRANSISTOR (Q7514)	2SC3181N
⚠	20	TRANSISTOR (Q7503)	2SC4793
	21	TRANSISTOR (Q7504)	2SC4793
	22	TRANSISTOR (Q7509)	2SA1837
	23	TRANSISTOR (Q7510)	2SA1837

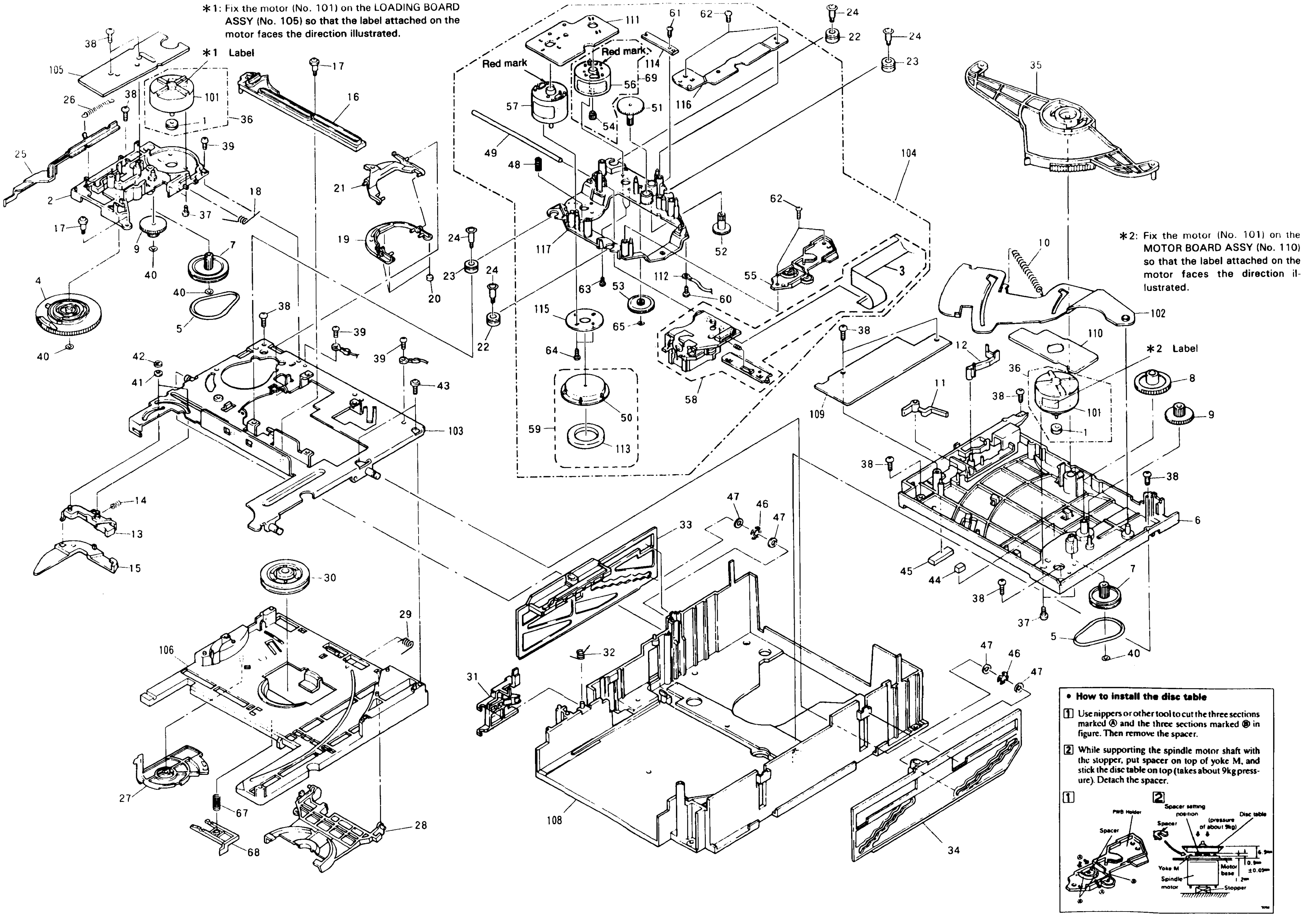
2.5 MULTI MECHA ASSY

Parts List of Multi Mecha Assy

Mark	No.	Description	Parts No.
	1	MOTOR PULLEY	PNW1634
	2	GEAR HOLDER	PNW1929
	3	PU FREXIBLE CABLE	PNP1343
	4	CAM GEAR	PNW1923
	5	BELT	PEB1138
	6	TOP GUIDE N	PNW2441
	7	GEAR PULLEY	PNW1918
	8	GEAR S	PNW1919
	9	GEAR L	PNW1920
	10	EJECT SPRING	PBH1107
	11	SWITCH LEVER	PNW1927
	12	SEVEN BAR	PNW1931
	13	SUB ROTARY LEVER	PNW1933
	14	SUB ROTARY LEVER SPRING	PBH1111
	15	ROTARY LEVER	PNW1932
	16	DRIVE PLATE	PNW1930
	17	MOTOR SCREW	PBA-112
	18	HOLDER LEVER SPRING	PBH1110
	19	DISC HOLDER	PNW1924
	20	CUSHION A	PED1001
	21	HOLDER LEVER	PNW1925
	22	FLOAT RUBBER	PEB1014
	23	FLOAT RUBBER	PEB1132
	24	FLOAT SCREW	PBA1073
	25	RELEASE LEVER	PNW1934
	26	RELEASE SPRING	PBH1106
	27	CLAMPER CAM	PNW1922
	28	CLAMPER HOLDER	PNW1921
	29	CLAMPER SPRING	PBH1109
	30	CLAMPER	PNW1857
	31	LOCK LEVER	PNW1917
	32	LOCK SPRING	PBH1108
	33	STAIR NL	PNW2443
	34	STAIR NR	PNW2444
	35	SYNCHRONIZE LEVER	PNW1926
	36	MOTOR ASSY (LOADING, DISC SELECT)	PEA1130
	37	SCREW	PMZ26P040FMC
	38	SCREW	PPZ30P080FMC
	39	SCREW	BBZ30P060FMC
	40	WASHER	WT26D047D025
	41	WASHER	WA31D054D025
	42	E RING	Z39-010
	43	SCREW	IPZ30P080FMC
	44	RUBBER SPACER	PEB1238
	45	RUBBER SPACER	PEB1179
	46	SILENT RING	PBK1093
	47	WASHER	WA62D130D025
	48	EARTH SPRING	PBH1132
	49	GUIDE BAR	PLA1094
	50	DISC TABLE	PNW1067
	51	GEAR 1	PNW2052
	52	GEAR 2	PNW2053
	53	GEAR 3	PNW2054
	54	PINION GEAR	PNW2055
	55	PWB HOLDER	PNW2057
NSP	56	CARRIAGE DC MOTOR/0.3W	PXM1027
	57	D.C. MOTOR ASSY (SPINDLE, with OIL)	PEA1235
	58	PICKUP ASSY	PEA1179
	59	DISC TABLE ASSY	PEA1035
	60	SCREW	BBZ26P060FMC
	61	SCREW	BPZ20P060FMC
	62	SCREW	BPZ26P100FMC
	63	SCREW	JFZ17P025FZK
	64	SCREW	JFZ20P040FMC
	65	WASHER	WT12D032D025
	66	....	
	67	STOP SPRING	PBH1131
	68	STOPPER	PNW2069
	69	CARRIAGE DC MOTOR ASSY	PEA1246
NSP	101	MOTOR	VXM1033
	102	EJECT LEVER	PNB1306
	103	UPPER CHASSIS N	PNB1267
NSP	104	SERVO MECHANISM ASSY M	PXA1537
NSP	105	LOADING BOARD ASSY	AWZ7207
	106	SUB CHASSIS N	PNW2440
	107	....	
	108	MAIN CHASSIS	PNW2074
NSP	109	SELECT BOARD ASSY	AWZ7209
NSP	110	MOTOR BOARD ASSY	AWZ7208
NSP	111	MECHANISM BOARD ASSY	PWX1192
NSP	112	EARTH LEAD UNIT	PDF1074
	113	CLAMP MAGNET	PMF1014
NSP	114	GEAR STOPPER	PNB1303
NSP	115	YOKE M	PNB1312
NSP	116	AV ANGLE	PNB1405
	117	CARRIAGE BASE	PNW2445

∗1: Fix the motor (No. 101) on the LOADING BOARD ASSY (No. 105) so that the label attached on the motor faces the direction illustrated.

∗2: Fix the motor (No. 101) on the MOTOR BOARD ASSY (No. 110) so that the label attached on the motor faces the direction illustrated.


∗1 Label
Red mark
Red mark
∗2 Label
Spacer setting position
(pressure of about 9kg)
Disc table
Spacer
PWB Holder
Spacer
Ⓐ
Ⓑ
Yoke M
Motor base
Spindle motor
Stopper
6.9mm
0.9mm ±0.05mm
1.2mm
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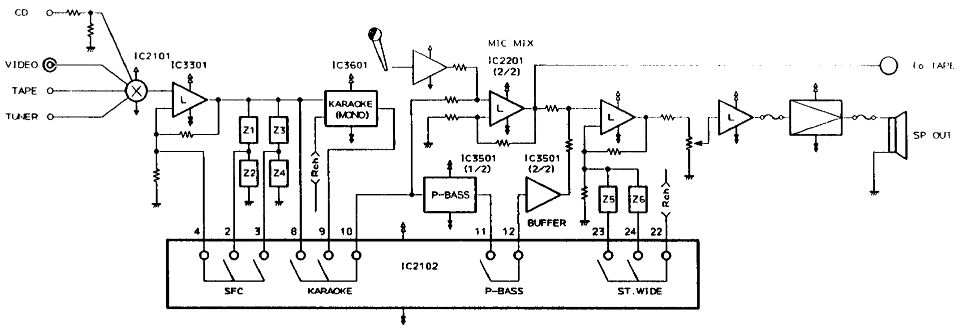
- **How to install the disc table**

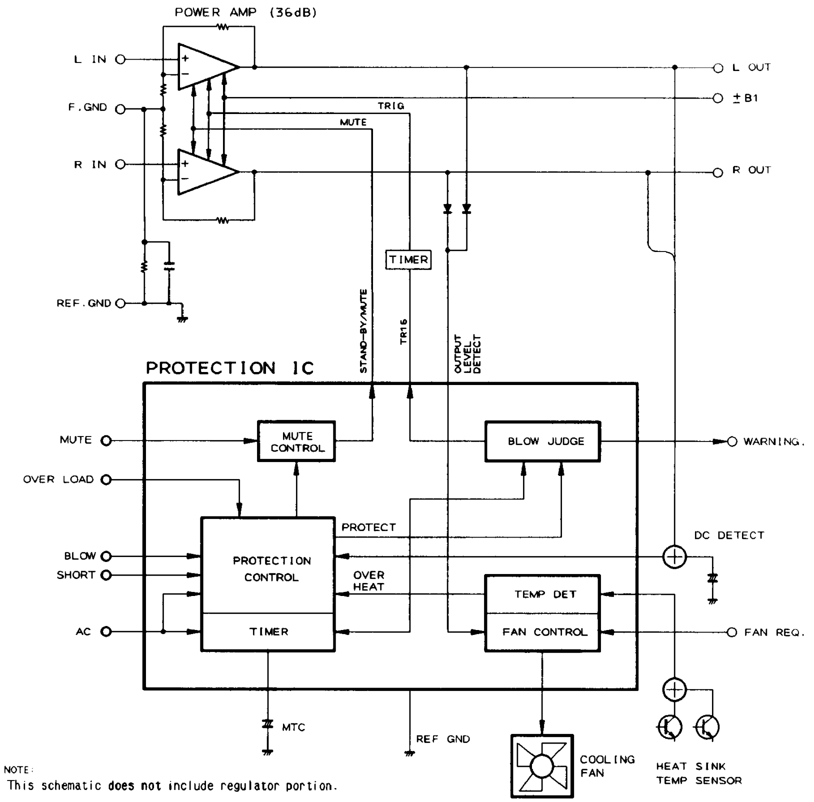
1 Use nippers or other tool to cut the three sections marked Ⓐ and the three sections marked Ⓑ in figure. Then remove the spacer.

2 While supporting the spindle motor shaft with the stopper, put spacer on top of yoke M, and stick the disc table on top (takes about 9kg pressure). Detach the spacer.

3. BLOCK DIAGRAM


CD
VIDEO
TAPE
TUNER
IC2101
IC3301
IC3601
KARAOKE (MONO)
MIC MIX
IC2201 (2/2)
IC3501 (1/2)
IC3501 (2/2)
P-BASS
BUFFER
Z1
Z2
Z3
Z4
Z5
Z6
Rch
4
2
3
8
9
10
11
12
23
24
22
IC2102
SFC
KARAOKE
P-BASS
ST.WIDE
to TAPE
SP OUT

POWER AMP MODULE SECTION


POWER AMP (36dB)
L IN
F.GND
R IN
REF.GND
L OUT
±B1
R OUT
TRIG
MUTE
TIMER
STAND-BY/MUTE
TR16
OUTPUT LEVEL DETECT
PROTECTION IC
MUTE
OVER LOAD
BLOW
SHORT
AC
MUTE CONTROL
PROTECTION CONTROL
TIMER
PROTECT
OVER HEAT
BLOW JUDGE
TEMP DET
FAN CONTROL
WARNING.
DC DETECT
FAN REQ.
MTC
REF GND
COOLING FAN
HEAT SINK TEMP SENSOR

NOTE:
This schematic **does not** include regulator portion.

4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   V : Signal voltage at rated output.
   or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ⊘ : Adjusting point.
   - : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH–□ ON THE SCHEMATIC DIAGRAM:**
   - SCH–□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. **SWITCHES** (Underline indicates switch position):

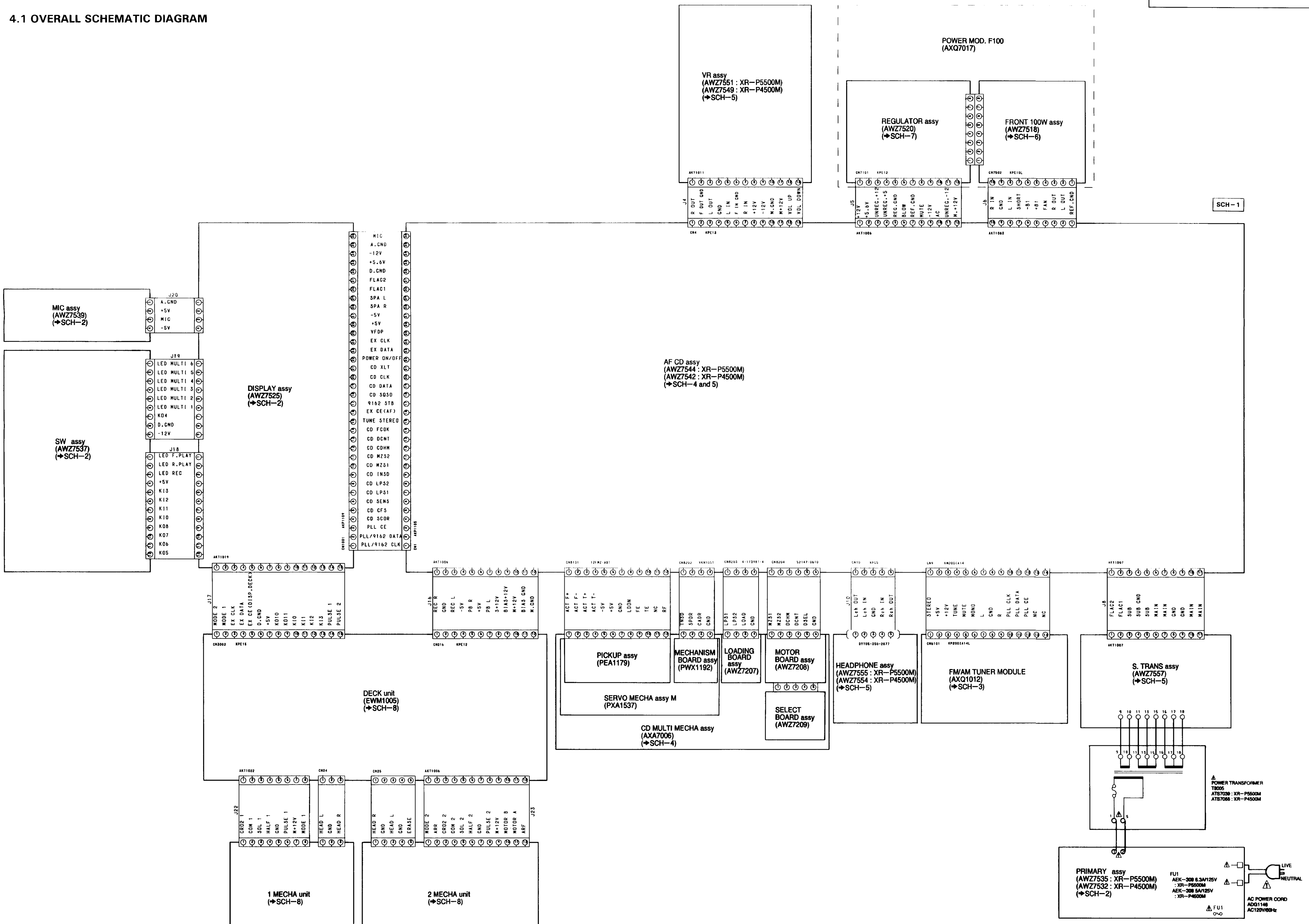
DISPLAY assy

S1801	TUNING +
S1802	SFC/KARAOKE
S1803	FUNCTION (DEMO)
S1804	TUNING –
S1805	FM
S1806	P. BASS
S1807	SURROUND & STEREO WIDE
S1808	AM
S1809	MEMORY
S1810	CD DISPLAY
S1811	MONO
S1812	FREQ/STATION
S1813	CLOCK/CLOCK ADJ
S1814	TIMER REC/WAKE–UP
S1815	POWER STANDBY/ON

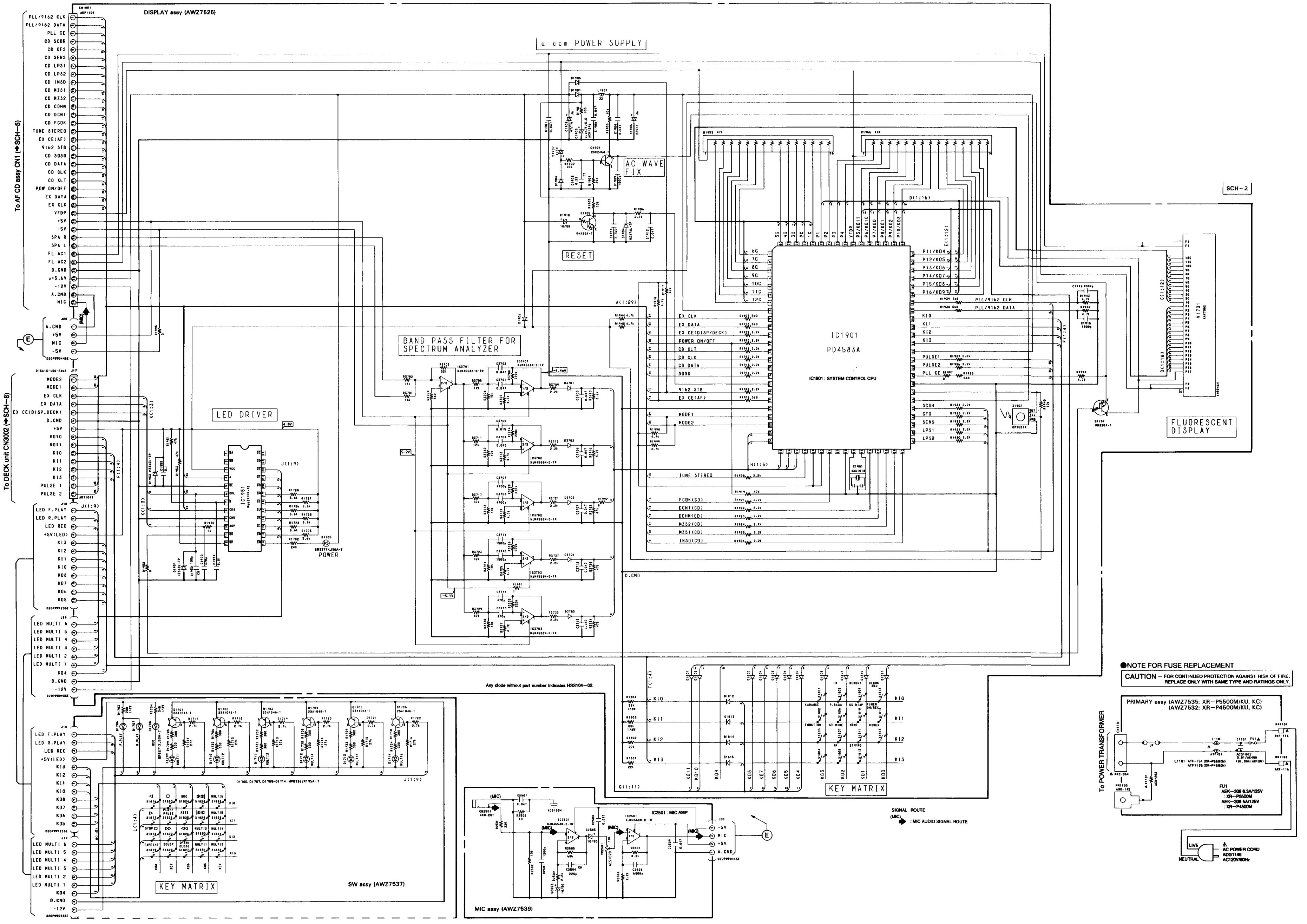
SW assy

S1816	◀ REV PLAY
S1817	▶ FWD PLAY
S1818	■ STOP (TAPE)
S1819	TAPE Ⅰ/Ⅱ
S1820	■ STOP (CD)
S1821	▶❚❚ PLAY/PAUSE
S1822	▶▶ FF
S1823	DOLBY NR
S1824	●❚❚ REC PAUSE
S1825	ASES/COPY
S1826	◀◀ REW
S1827	⏏ OPEN/EJECT
S1828	▶▶ ▶▶❙ TRACK/MANUAL FWD SERCH
S1829	❙◀◀ ◀◀ TRACK/MANUAL REV SERCH
S1830	DISC SELECTOR 2
S1831	DISC SELECTOR 1
S1832	DISC SELECTOR 6
S1833	DISC SELECTOR 5
S1834	DISC SELECTOR 4
S1835	DISC SELECTOR 3

4.1 OVERALL SCHEMATIC DIAGRAM

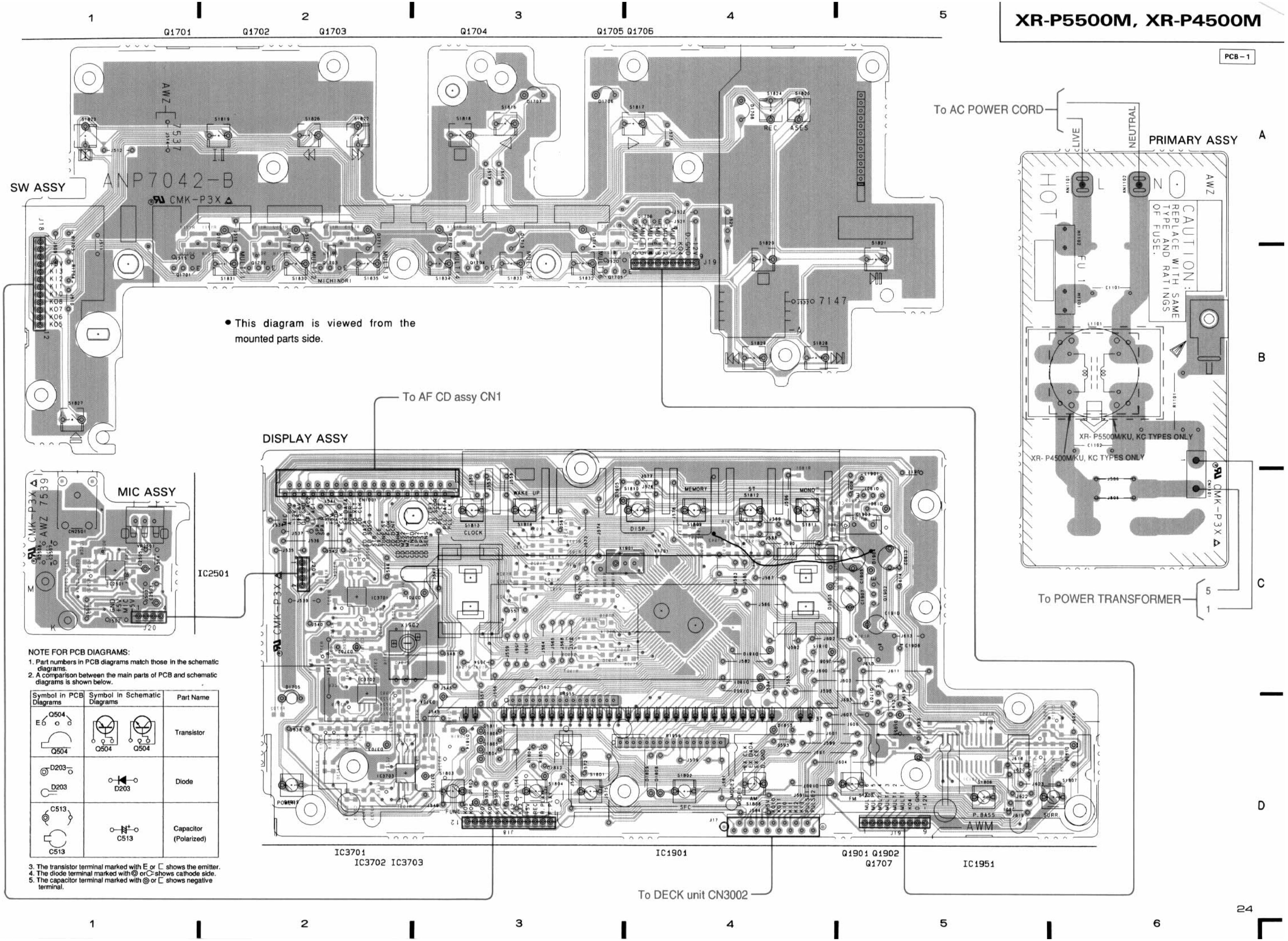

VR assy
(AWZ7551 : XR−P5500M)
(AWZ7549 : XR−P4500M)
(➔SCH−5)
POWER MOD. F100
(AXQ7017)
REGULATOR assy
(AWZ7520)
(➔SCH−7)
FRONT 100W assy
(AWZ7518)
(➔SCH−6)
SCH−1
J4
R OUT
F OUT GND
L OUT
GND
L IN
F IN GND
R IN
+12V
−12V
M.GND
M+12V
VOL UP
VOL DOWN
J5
+12V
+5.6V
UNREC.+12
UNREC.+5
REG.GND
BLOW
REF.GND
MUTE
−12V
AC
UNREC.−12
M.+12V
J6
R IN
GND
L IN
SHORT
−B1
+B1
FAN
R OUT
L OUT
REF.GND
MIC assy
(AWZ7539)
(➔SCH−2)
J20
A.GND
+5V
MIC
−5V
SW assy
(AWZ7537)
(➔SCH−2)
J19
LED MULTI 6
LED MULTI 5
LED MULTI 4
LED MULTI 3
LED MULTI 2
LED MULTI 1
KO4
D.GND
−12V
J18
LED F.PLAY
LED R.PLAY
LED REC
+5V
KI3
KI2
KI1
KI0
KO8
KO7
KO6
KO5
DISPLAY assy
(AWZ7525)
(➔SCH−2)
MIC
A.GND
−12V
+5.6V
D.GND
FLAC2
FLAC1
SPA L
SPA R
−5V
+5V
VFDP
EX CLK
EX DATA
POWER ON/OFF
CD XLT
CD CLK
CD DATA
CD SQSO
9162 STB
EX CE(AF)
TUNE STEREO
CD FCOK
CD DCNT
CD CDHM
CD MZS2
CD MZS1
CD INSD
CD LPS2
CD LPS1
CD SENS
CD CFS
CD SCOR
PLL CE
PLL/9162 DATA
PLL/9162 CLK
AF CD assy
(AWZ7544 : XR−P5500M)
(AWZ7542 : XR−P4500M)
(➔SCH−4 and 5)
J17
MODE 2
MODE 1
EX CLK
EX DATA
EX CE(DISP,DECK)
D.GND
+5V
KO10
KO11
KI0
KI1
KI2
KI3
PULSE 1
PULSE 2
J16
REC R
GND
REC L
−5V
PB R
+5V
PB L
S+12V
BIAS+12V
M+12V
BIAS GND
M.GND
ACT F+
ACT F−
ACT T+
ACT T−
−5V
+5V
GND
LDON
FE
TE
NC
RF
INSD
SPDR
CADR
GND
LPS1
LPS2
LOAD
GND
MZS1
MZS2
DCHM
DCNT
DSEL
GND
J10
Lch OUT
Lch IN
GND
Rch IN
Rch OUT
STEREO
+5V
+12V
TUNE
MUTE
MONO
L
GND
R
PLL CLK
PLL DATA
PLL CE
NC
NC
J8
FLAC2
FLAC1
SUB
SUB GND
SUB
MAIN
MAIN
GND
GND
MAIN
MAIN
DECK unit
(EWM1005)
(➔SCH−8)
PICKUP assy
(PEA1179)
MECHANISM BOARD assy
(PWX1192)
LOADING BOARD assy
(AWZ7207)
MOTOR BOARD assy
(AWZ7208)
SELECT BOARD assy
(AWZ7209)
SERVO MECHA assy M
(PXA1537)
CD MULTI MECHA assy
(AXA7006)
(➔SCH−4)
HEADPHONE assy
(AWZ7555 : XR−P5500M)
(AWZ7554 : XR−P4500M)
(➔SCH−5)
FM/AM TUNER MODULE
(AXQ1012)
(➔SCH−3)
S. TRANS assy
(AWZ7557)
(➔SCH−5)
9 10 11 13 15 16 17 18
1 5
POWER TRANSFORMER
T8005
ATS7039 : XR−P5500M
ATS7068 : XR−P4500M
J22
CRO2 1
COM 1
SOL 1
HALF 1
GND
PULSE 1
M+12V
MODE 1
HEAD L
GND
HEAD R
HEAD R
GND
HEAD L
GND
ERASE
J23
MODE 2
ARR
CRO2 2
COM 2
SOL 2
HALF 2
GND
PULSE 2
M+12V
MOTOR B
MOTOR A
ARF
1 MECHA unit
(➔SCH−8)
2 MECHA unit
(➔SCH−8)
PRIMARY assy
(AWZ7535 : XR−P5500M)
(AWZ7532 : XR−P4500M)
(➔SCH−2)
FU1
AEK−309 6.3A/125V
: XR−P5500M
AEK−308 5A/125V
: XR−P4500M
FU1
LIVE
NEUTRAL
AC POWER CORD
ADG1146
AC120V/60Hz

4.2 DISPLAY ASSY, SW ASSY, MIC ASSY AND PRIMARY ASSY


DISPLAY assy (AWZ7525)
To AF CD assy CN1 (➡SCH−5)
To DECK unit CN3002 (➡SCH−8)
CN1001
PLL/9162 CLK
PLL/9162 DATA
PLL CE
CD SCOR
CD CFS
CD SENS
CD LPS1
CD LPS2
CD INSD
CD MZS1
CD MZS2
CD DCHM
CD DCNT
CD FCDX
TUNE STEREO
EX CE(AF)
9162 STB
CD SQSO
CD DATA
CD CLK
CD XLT
POW ON/OFF
EX DATA
EX CLK
VFDP
+5V
−5V
SPA R
SPA L
FL AC1
FL AC2
D.GND
u+5.6V
−12V
A.GND
MIC
J20
A.GND
+5V
MIC
−5V
J17
MODE2
MODE1
EX CLK
EX DATA
EX CE(DISP,DECK)
D.GND
+5V
KO10
KO11
KI0
KI1
KI2
KI3
PULSE 1
PULSE 2
J(1:9)
J18
LED F.PLAY
LED R.PLAY
LED REC
+5V(LED)
KI3
KI2
KI1
KI0
KO8
KO7
KO6
KO5
J19
LED MULTI 6
LED MULTI 5
LED MULTI 4
LED MULTI 3
LED MULTI 2
LED MULTI 1
KO4
D.GND
−12V
u-com POWER SUPPLY
AC WAVE FIX
RESET
BAND PASS FILTER FOR SPECTRUM ANALYZER
LED DRIVER
IC1951
D1705
BR5371XJ5A-T
POWER
IC1901
PD4583A
IC1901 : SYSTEM CONTROL CPU
FLUORESCENT DISPLAY
V1701
SCH−2
D(1:16)
E(1:12)
C(1:12)
F(1:4)
K(1:3)
H(1:5)
A(1:29)
C(1:11)
D.GND
5.2V
−5.1V
−4.6V
KEY MATRIX
SW assy (AWZ7537)
D1706, D1707, D1709−D1714: MPG5362X19SA−T
MIC assy (AWZ7639)
IC2501 : MIC AMP
Any diode without part number indicates HSS104−02.
SIGNAL ROUTE
(MIC) : MIC AUDIO SIGNAL ROUTE
PRIMARY assy (AWZ7535: XR−P5500M/KU, KC)
(AWZ7532: XR−P4500M/KU, KC)
To POWER TRANSFORMER
CN1101
RKC-054
KN1103
ANK-142
R1101
ACN-208
JP
L1101
ATF151
C1101
ACG1002
0.01/AC400
(UL, CSA:AC125)
FU1
KN1101
AKF-116
KN1102
AKF-116
L1101 : ATF-151 (XR-P5500M)
ATF1136 (XR-P4500M)
FU1
AEK−309 6.3A/125V
: XR−P5500M
AEK−308 5A/125V
: XR−P4500M
LIVE
NEUTRAL
AC POWER CORD
ADG1146
AC120V/60Hz

●NOTE FOR FUSE REPLACEMENT

CAUTION – FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

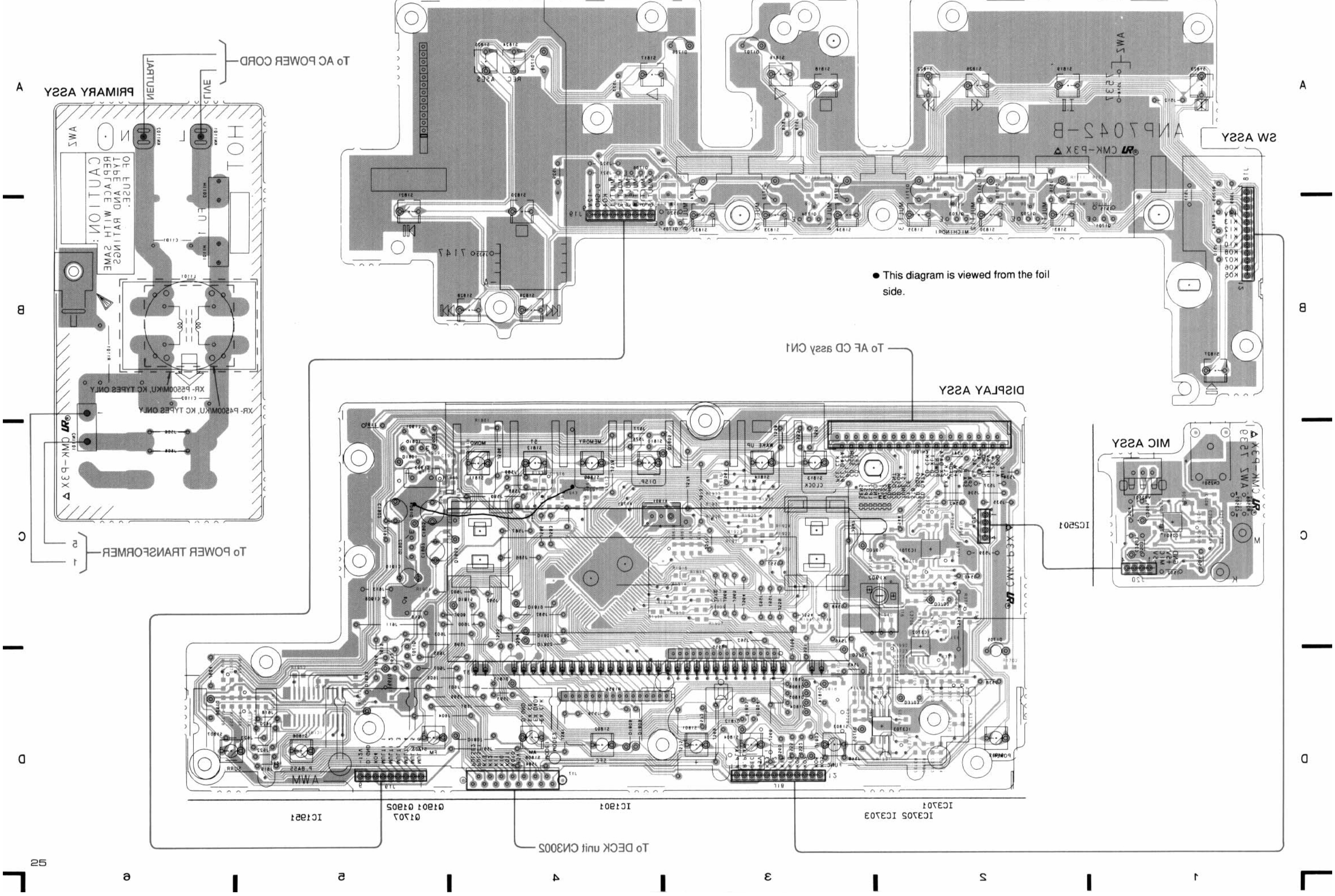

1
2
3
4
5
6
A
B
C
D
Q1701
Q1702
Q1703
Q1704
Q1705 Q1706
SW ASSY
ANP7042-B
CMK-P3X
AWZ 7537
J18
J19
7147
REC
ASES
MICHINORI
MIC ASSY
CMK-P3X
AWZ 7539
J20
GND
+5V
MIC
-5V
IC2501
DISPLAY ASSY
To AF CD assy CN1
CLOCK
WAKE UP
DISP
MEMORY
ST
MONO
POWER
FUNC
SFC
FM
AM
P.BASS
SURR
AWM
J17
J18
J19
IC3701
IC3702 IC3703
IC1901
Q1901 Q1902
Q1707
IC1951
To DECK unit CN3002
To AC POWER CORD
LIVE
NEUTRAL
PRIMARY ASSY
HOT
L
N
AWZ
CAUTION: REPLACE WITH SAME TYPE AND RATINGS OF FUSE.
FU 1
XR- P5500M/KU, KC TYPES ONLY
XR- P4500M/KU, KC TYPES ONLY
CMK-P3X
To POWER TRANSFORMER
5
1

- This diagram is viewed from the mounted parts side.

NOTE FOR PCB DIAGRAMS:
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

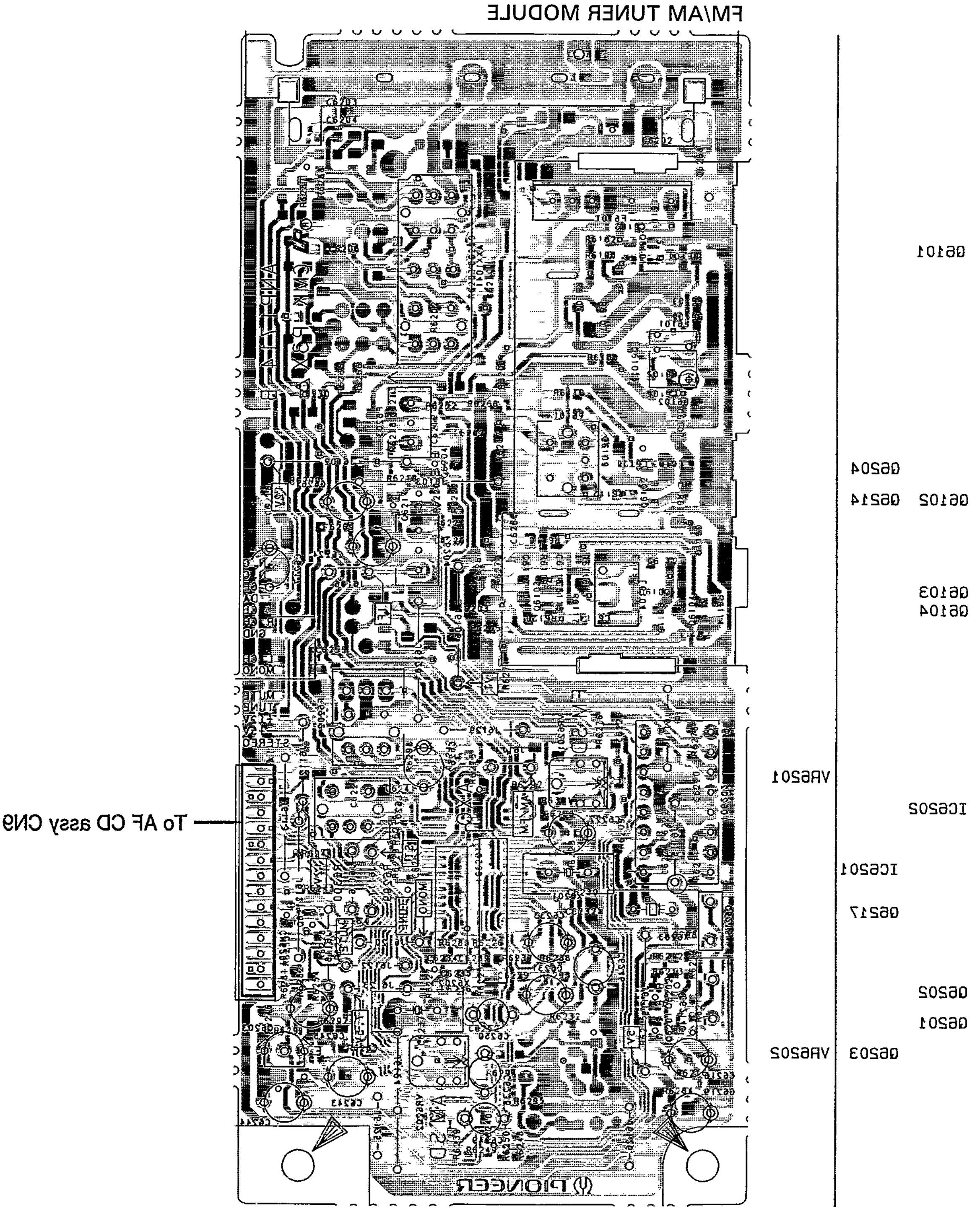
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 E Q504	Q504 Q504	Transistor
D203 D203	D203	Diode
C513 C513	C513	Capacitor (Polarized)

3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊂ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.


PRIMARY ASSY
To AC POWER CORD
NEUTRAL
LIVE
N
L
HOT
AWZ
CAUTION:
REPLACE WITH SAME
TYPE AND RATINGS
OF FUSE.
FU 1
XR-P5500M/KU, KC TYPES ONLY
XR-P4500M/KU, KC TYPES ONLY
CMK-P3X
To POWER TRANSFORMER
5
1
SW ASSY
ANP7042-B
CMK-P3X
AWZ
7537
7147
J18
J19
DISPLAY ASSY
To AF CD assy CN1
MONO
ST
MEMORY
DISP
WAKE UP
CLOCK
MIC ASSY
AWZ 7559
IC2501
J20
M
K
J17
AWM
P.BASS
SURR
FM
POWER
FUNC
IC1951
Q1901 Q1902
Q1707
IC1901
IC3701
IC3702 IC3703
To DECK unit CN3002
Q1701
Q1702
Q1703
Q1704
Q1705 Q1706
A
B
C
D
1
2
3
4
5
6

● This diagram is viewed from the foil side.

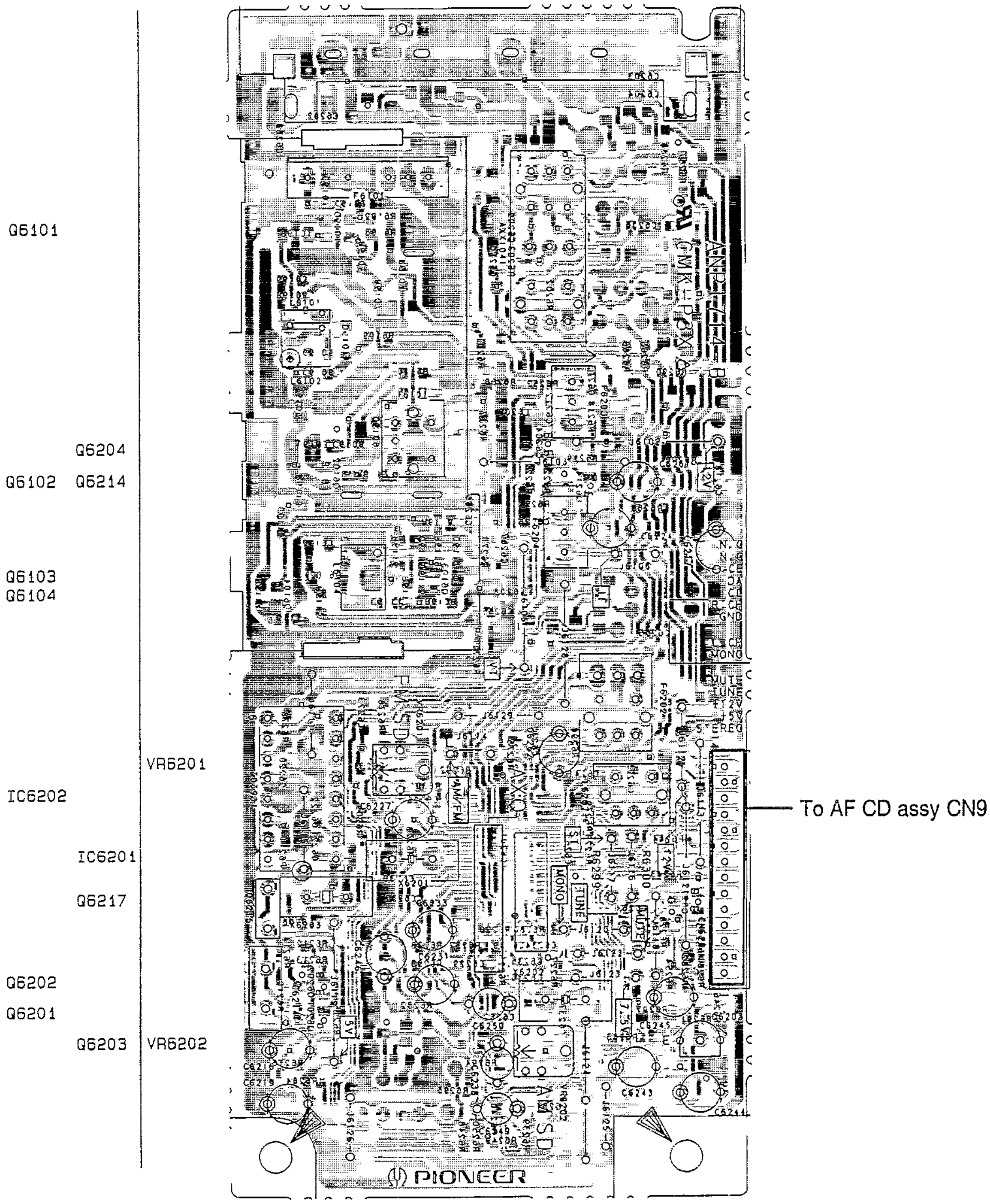
4.3 FM/AM TUNER MODULE


FM/AM TUNER MODULE
Q6101
Q6204
Q6102 Q6214
Q6103
Q6104
VR6201
IC6202
IC6201
Q6217
Q6202
Q6201
Q6203 VR6202
To AF CD assy CN9
PIONEER

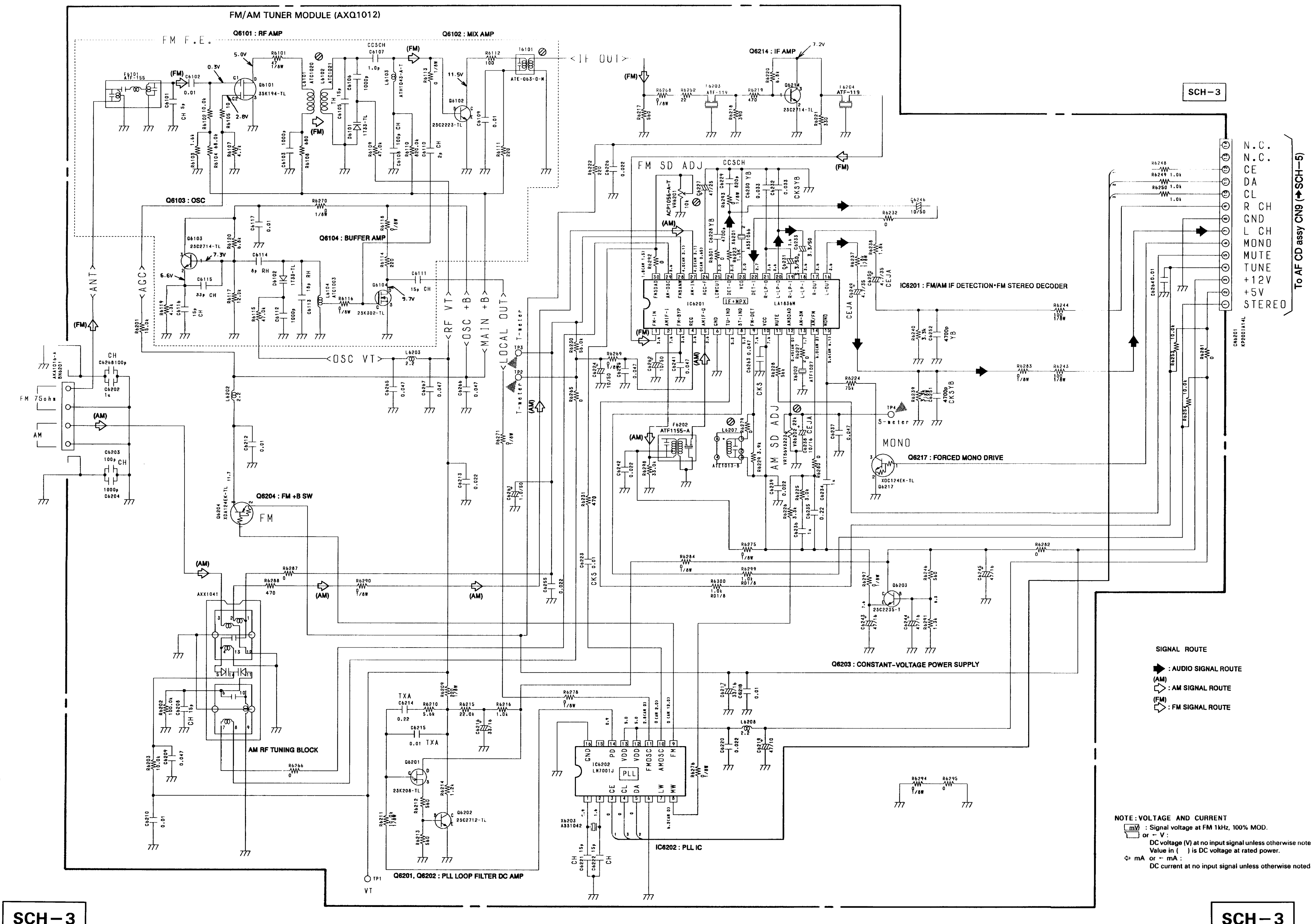
- This diagram is viewed from the foil side.

4.3 FM/AM TUNER MODULE

FM/AM TUNER MODULE


Q6101
Q6204
Q6102
Q6214
Q6103
Q6104
VR6201
IC6202
IC6201
Q6217
Q6202
Q6201
Q6203
VR6202
To AF CD assy CN9
MONO
MUTE
TUNE
STEREO
GND
PIONEER

- This diagram is viewed from the mounted parts side.


FM/AM TUNER MODULE (AXQ1012)
FM F.E.
Q6101 : RF AMP
Q6102 : MIX AMP
Q6103 : OSC
Q6104 : BUFFER AMP
Q6214 : IF AMP
Q6204 : FM +B SW
AM RF TUNING BLOCK
AXX1041
Q6201, Q6202 : PLL LOOP FILTER DC AMP
IC6202 : PLL IC
LM7001J
PLL
IC6201 : FM/AM IF DETECTION•FM STEREO DECODER
LA1836M
IF+MPX
Q6217 : FORCED MONO DRIVE
Q6203 : CONSTANT-VOLTAGE POWER SUPPLY
FM SD ADJ
AM SD ADJ
<ANT>
<AGC>
<OSC VT>
<RF VT>
<OSC +B>
<MAIN +B>
<LOCAL OUT>
<IF OUT>
T-meter
S-meter
MONO
FM 75ohm
AM
(FM)
(AM)
TP1 VT
CN6201 KP200IA14L
N.C.
N.C.
CE
DA
CL
R CH
GND
L CH
MONO
MUTE
TUNE
+12V
+5V
STEREO
To AF CD assy CN9 (➔SCH–5)
SCH–3

SIGNAL ROUTE

- ➡ : AUDIO SIGNAL ROUTE
- (AM) ⇨ : AM SIGNAL ROUTE
- (FM) ⇨ : FM SIGNAL ROUTE

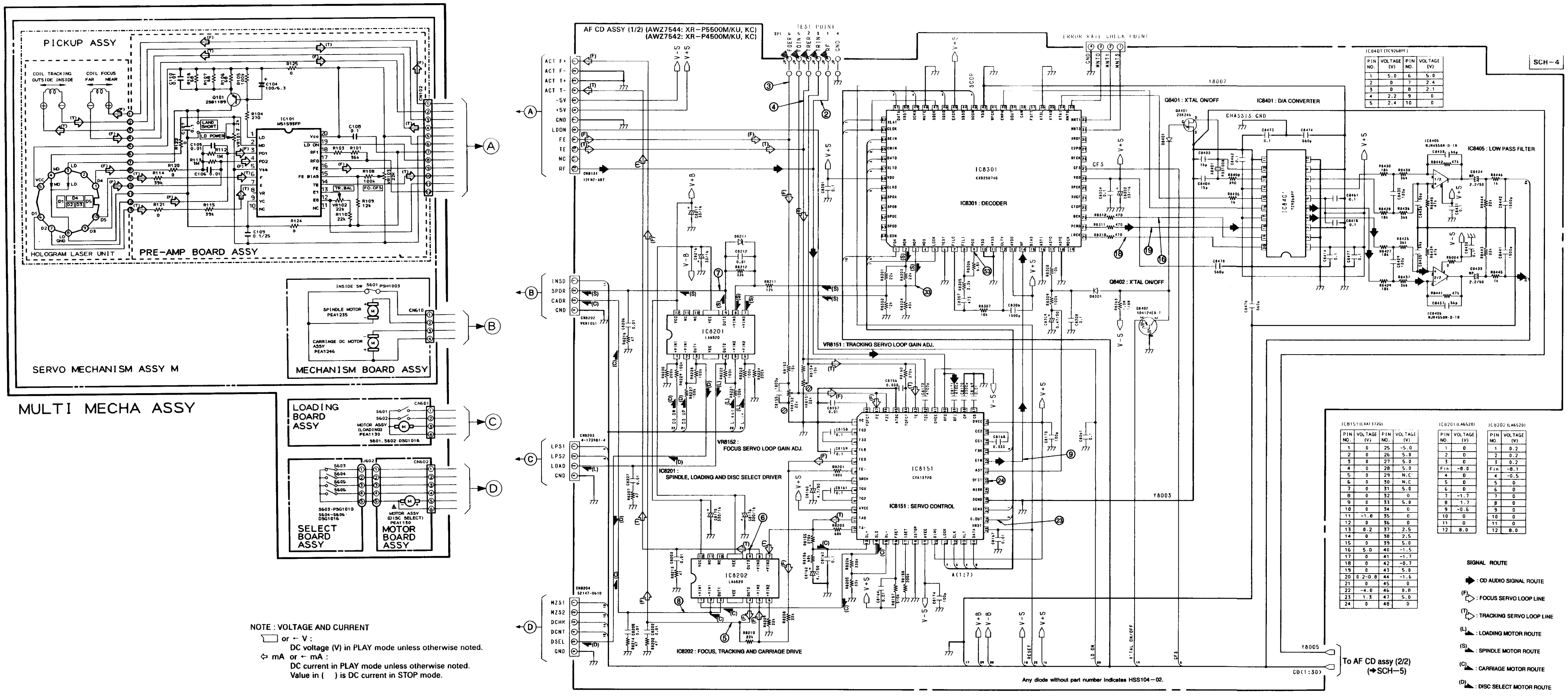
NOTE : VOLTAGE AND CURRENT

mV : Signal voltage at FM 1kHz, 100% MOD.
or ~ V :
DC voltage (V) at no input signal unless otherwise noted.
Value in ( ) is DC voltage at rated power.
⇦ mA or ← mA :
DC current at no input signal unless otherwise noted.

4.4 AF CD ASSY, VR ASSY, HEADPHONE ASSY, S. TRANS ASSY AND MULTI MECHA ASSY

IC8301 (CXD2507AQ)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	4.9	17	2.5	33	0	49	0
2	4.9	18	0	34	2.3	50	4.9
3	2.6	19	N. C	35	N. C	51	0
4	N. C	20	2.5	36	0	52	4.8
5	4.9	21	2.5	37	N. C	53	4.8
6	0	22	2.1	38	N. C	54	4.9
7	2.6	23	0	39	N. C	55	0
8	2.5	24	N. C	40	0	56	0
9	2.5	25	N. C	41	N. C	57	5.0
10	0	26	5.0	42	0	58	5.0
11	0	27	5.0	43	0	59	5.0
12	2.7	28	N. C	44	N. C	60	N. C
13	5.0	29	N. C	45	5.0	61	N. C
14	2.6	30	N. C	46	0	62	N. C
15	N. C	31	4.5	47	4.8	63	N. C
16	0	32	0	48	0	64	N. C


SCH-4
PICKUP ASSY
COIL TRACKING OUTSIDE INSIDE
COIL FOCUS FAR NEAR
HOLOGRAM LASER UNIT
PRE-AMP BOARD ASSY
IC101 M51595FP
Q101 2SB1189
SERVO MECHANISM ASSY M
MECHANISM BOARD ASSY
INSIDE SW S601 PSH1003
SPINDLE MOTOR PEA1235
CARRIAGE DC MOTOR ASSY PEA1246
MULTI MECHA ASSY
LOADING BOARD ASSY
MOTOR ASSY (LOADING) PEA1130
S601, S602 DSG1016
SELECT BOARD ASSY
S603-PSG1010
S604-S606: DSG1016
MOTOR ASSY (DISC SELECT) PEA1150
MOTOR BOARD ASSY
A
B
C
D
AF CD ASSY (1/2) (AWZ7544: XR-P5500M/KU, KC)
(AWZ7542: XR-P4500M/KU, KC)
ACT F+
ACT F-
ACT T+
ACT T-
-5V
+5V
GND
LDON
FE
TE
NC
RF
INSD
SPDR
CADR
GND
LPS1
LPS2
LOAD
GND
MZS1
MZS2
DCHK
DCNT
DSEL
GND
TEST POINT
FOER
FOIN
TRER
TRIN
RF
GND
ERROR RATE CHECK POINT
GND
MNT0
MNT1
MNT3
IC8201 LA6520
IC8201 : SPINDLE, LOADING AND DISC SELECT DRIVER
IC8202 LA6520
IC8202 : FOCUS, TRACKING AND CARRIAGE DRIVE
VR8152 : FOCUS SERVO LOOP GAIN ADJ.
VR8151 : TRACKING SERVO LOOP GAIN ADJ.
IC8151 CXA1372Q
IC8151 : SERVO CONTROL
IC8301 CXD2507AQ
IC8301 : DECODER
Q8401 : XTAL ON/OFF
Q8402 : XTAL ON/OFF
IC8401 TC9268PF
IC8401 : D/A CONVERTER
CHASSIS GND
IC8405 NJM4558N-D-TR
IC8405 : LOW PASS FILTER
V+5
V-5
V+B
V-B
RESET
LD ON
XTAL ON/OFF
CFS
SCOR
Y8003
Y8005
Y8007
CD(1:30)
Any diode without part number indicates HSS104-02.

IC8401 (TC9268PF)

PIN NO.	VOLTAGE (V)	PIN NO.	VOLTAGE (V)
1	5.0	6	5.0
2	0	7	2.4
3	0	8	2.1
4	2.2	9	0
5	2.4	10	0

IC8151 (CXA1372Q)

PIN NO.	VOLTAGE (V)	PIN NO.	VOLTAGE (V)
1	0	25	-5.0
2	0	26	5.0
3	0	27	5.0
4	0	28	5.0
5	0	29	N.C
6	0	30	N.C
7	0	31	5.0
8	0	32	0
9	0	33	5.0
10	0	34	0
11	-1.0	35	0
12	0	36	0
13	0.2	37	2.5
14	0	38	2.5
15	0	39	5.0
16	5.0	40	-1.5
17	0	41	-1.7
18	0	42	-0.7
19	0	43	5.0
20	0.2-0.8	44	-1.6
21	0	45	0
22	-4.0	46	0.8
23	1.3	47	5.0
24	0	48	0

IC8201 (LA6520)

PIN NO.	VOLTAGE (V)
1	0
2	0
3	0
Fin	-8.0
4	0
5	0
6	0
7	-1.7
8	1.7
9	-0.6
10	0
11	0
12	8.0

IC8202 (LA6520)

PIN NO.	VOLTAGE (V)
1	0.2
2	0.2
3	0.2
Fin	-8.1
4	-0.5
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	8.0

To AF CD assy (2/2)
(➔SCH-5)

SIGNAL ROUTE

- ➡ : CD AUDIO SIGNAL ROUTE
- (F)⇨ : FOCUS SERVO LOOP LINE
- (T)⇨ : TRACKING SERVO LOOP LINE
- (L)◣ : LOADING MOTOR ROUTE
- (S)◣ : SPINDLE MOTOR ROUTE
- (C)◣ : CARRIAGE MOTOR ROUTE
- (D)◣ : DISC SELECT MOTOR ROUTE

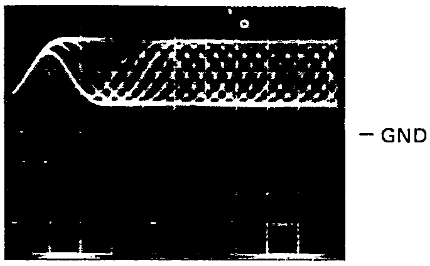
NOTE : VOLTAGE AND CURRENT
▭ or ← V :
DC voltage (V) in PLAY mode unless otherwise noted.
⇔ mA or ← mA :
DC current in PLAY mode unless otherwise noted.
Value in ( ) is DC current in STOP mode.

Waveforms

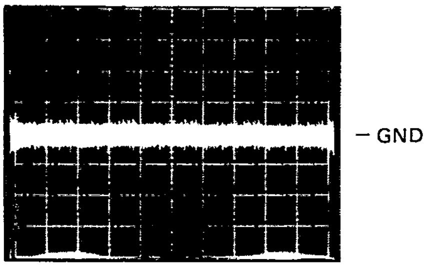
Note: The encircled numbers denote measuring point in the schematic disgram.

*1 50T-JUMP: After switching to the pause mode, press the manual search key.
*2 FOCUS-IN: Press the key without loading a disc.

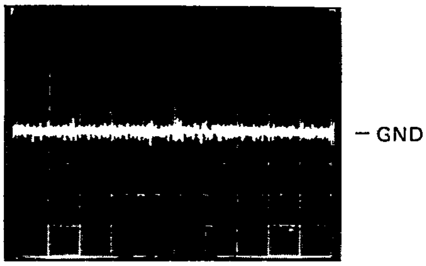
② TP1-Pin1: PLAY MODE (RF)
500mV/div 500nsec/div



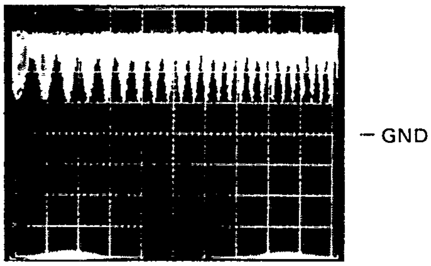
④ TP1-Pin2: PLAY MODE (TRER)
1V/div 1msec/div



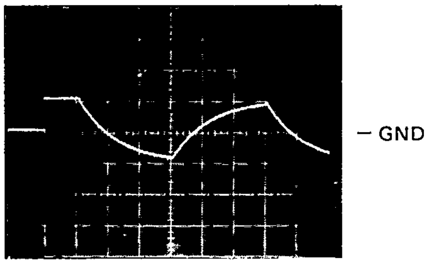
⑥ IC8202-Pin9: PLAY MODE (TRDR)
500mV/div 1msec/div



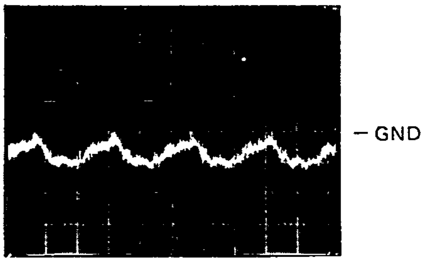
② TP1-Pin1: TRACK SEARCH MODE (RF)
500mV/div 200μsec/div



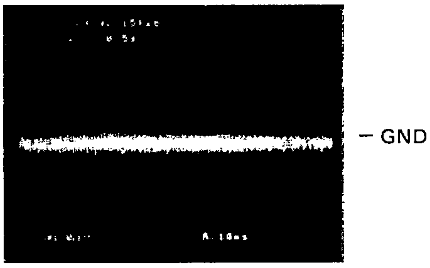
⑤ IC8202-Pin4: FOCUS-IN (*2) MODE (FODR)
1V/div 200msec/div



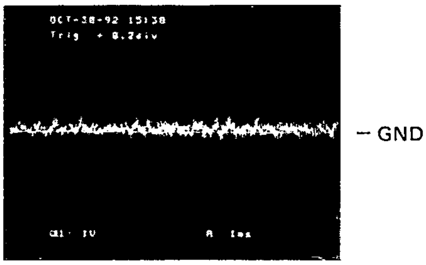
⑦ IC8201-Pin9: PLAY MODE (SPDR)
1V/div 50msec/div



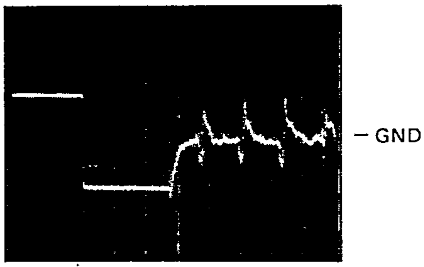
③ TP1-Pin6: PLAY MODE (FOER)
100mV/div 10msec/div



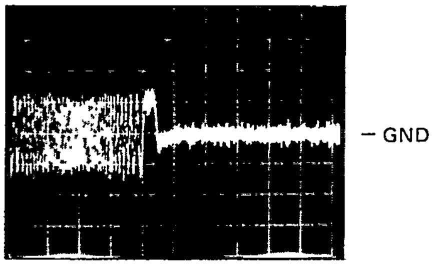
⑤ IC8202-Pin4: PLAY MODE (FODR)
1V/div 1msec/div



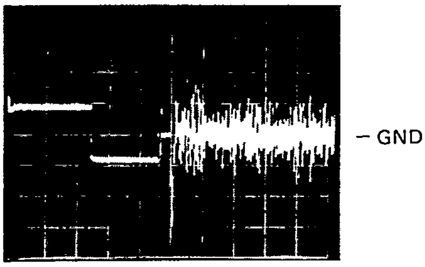
⑦ IC8201-Pin9: TRACK SEARCH MODE (SPDR)
2V/div 50msec/div



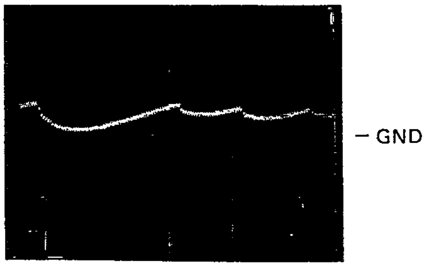
④ TP1-Pin2: 50T-JUMP (*1) MODE (TRER)
1V/div 1msec/div



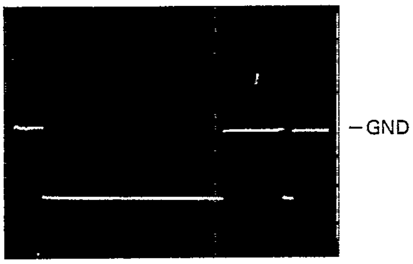
⑥ IC8202-Pin9: 50T-JUMP (*1) MODE (TRDR)
500mV/div 1msec/div



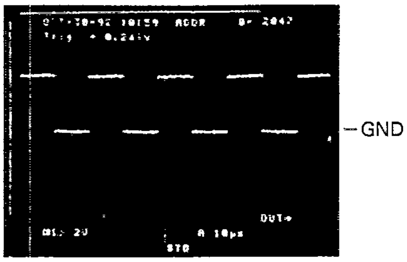
⑧ IC8202-Pin3: PLAY MODE (CADR)
0.2V/div 2sec/div



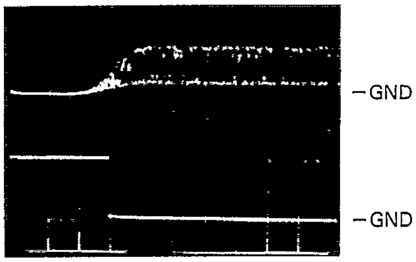
⑧ IC8202-Pin3: TRACK SEARCH MODE (CADR)
2V/div 200msec/div



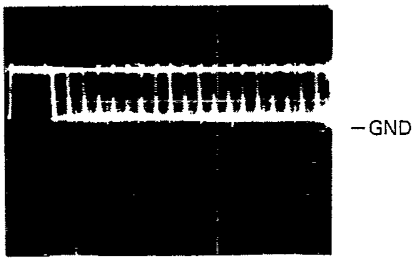
⑱ IC8301-Pin20: PLAY MODE (1kHz) (LRCK)
2V/div 10µsec/div



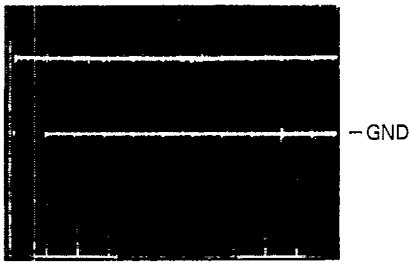
㉔ : PLAY MODE
Upper: TP1-Pin1 (RF) 1V/div
Lower: IC8151-Pin30 (DFCT)
5V/div 200µsec/div



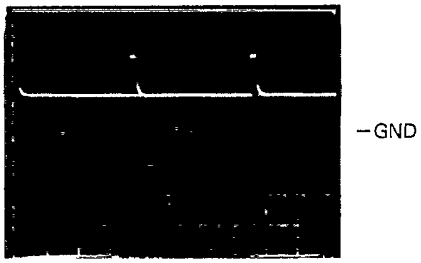
⑨ IC8151-Pin32: PLAY MODE (EFM)
2V/div 500nsec/div



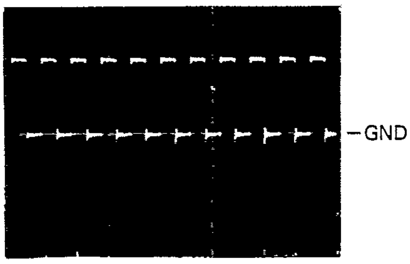
⑲ IC8301-Pin21: PLAY MODE (1kHz) (PCMD)
2V/div 500nsec/div



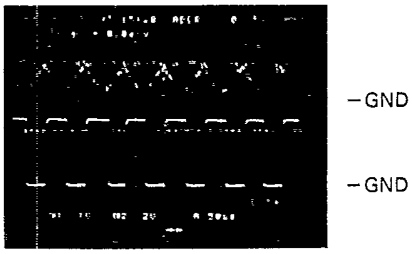
㉝ IC8301-Pin3: PLAY MODE (MDP)
2V/div 2µsec/div



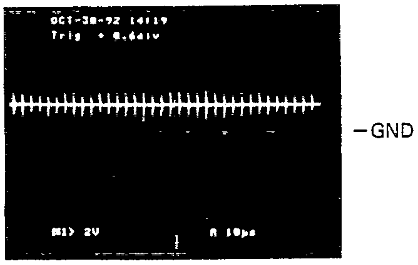
⑯ IC8301-Pin22: PLAY MODE (1kHz) (BCK)
2V/div 500nsec/div



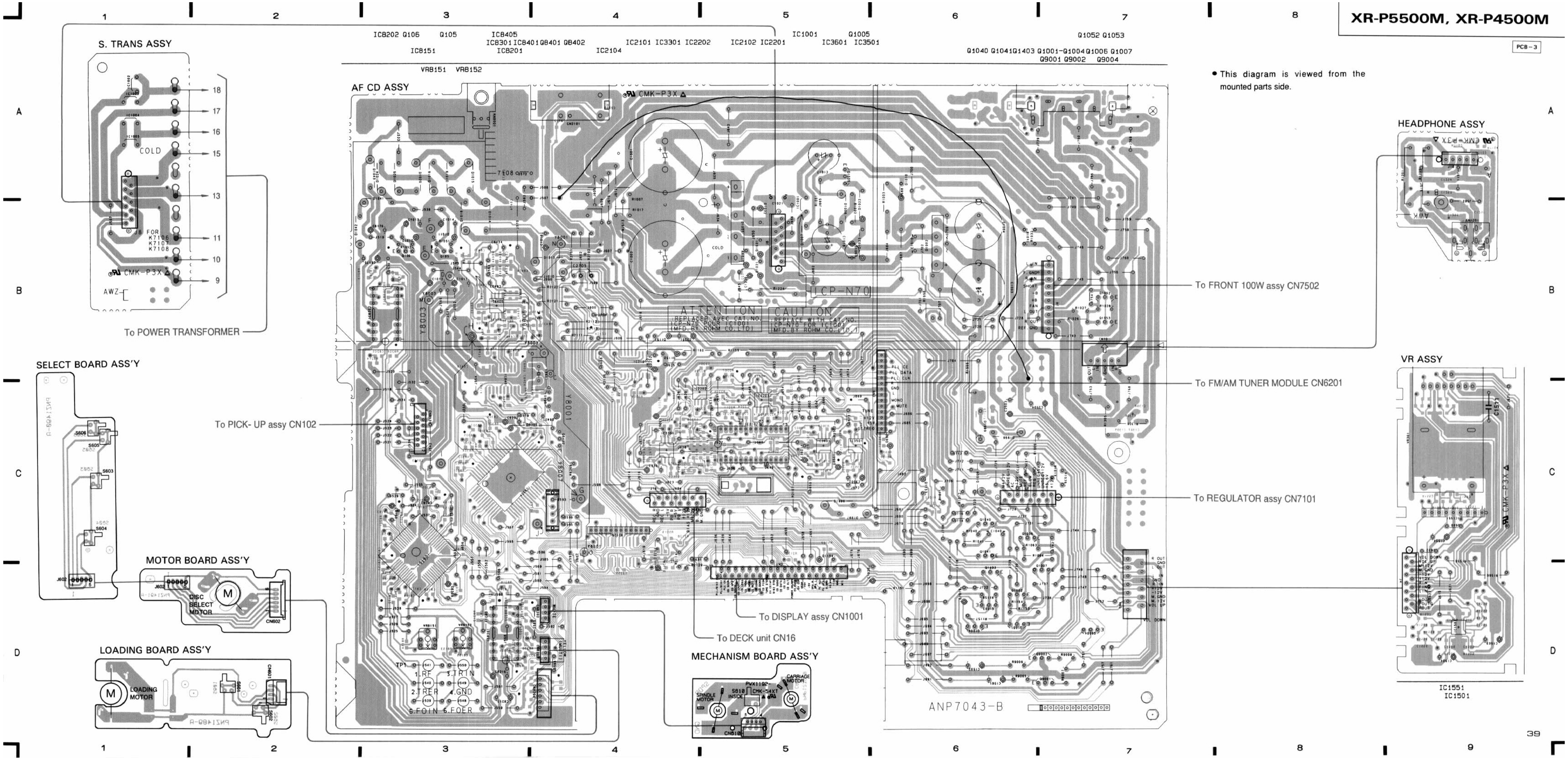
㉓ : TRACK SEARCH MODE
Upper: TP1-Pin1 (RF) 1V/div
Lower: IC8151-Pin26 (C. OUT)
2V/div 50µsec/div



(53) IC8301-Pin9: PLAY MODE (PCO)
2V/div 10µsec/div

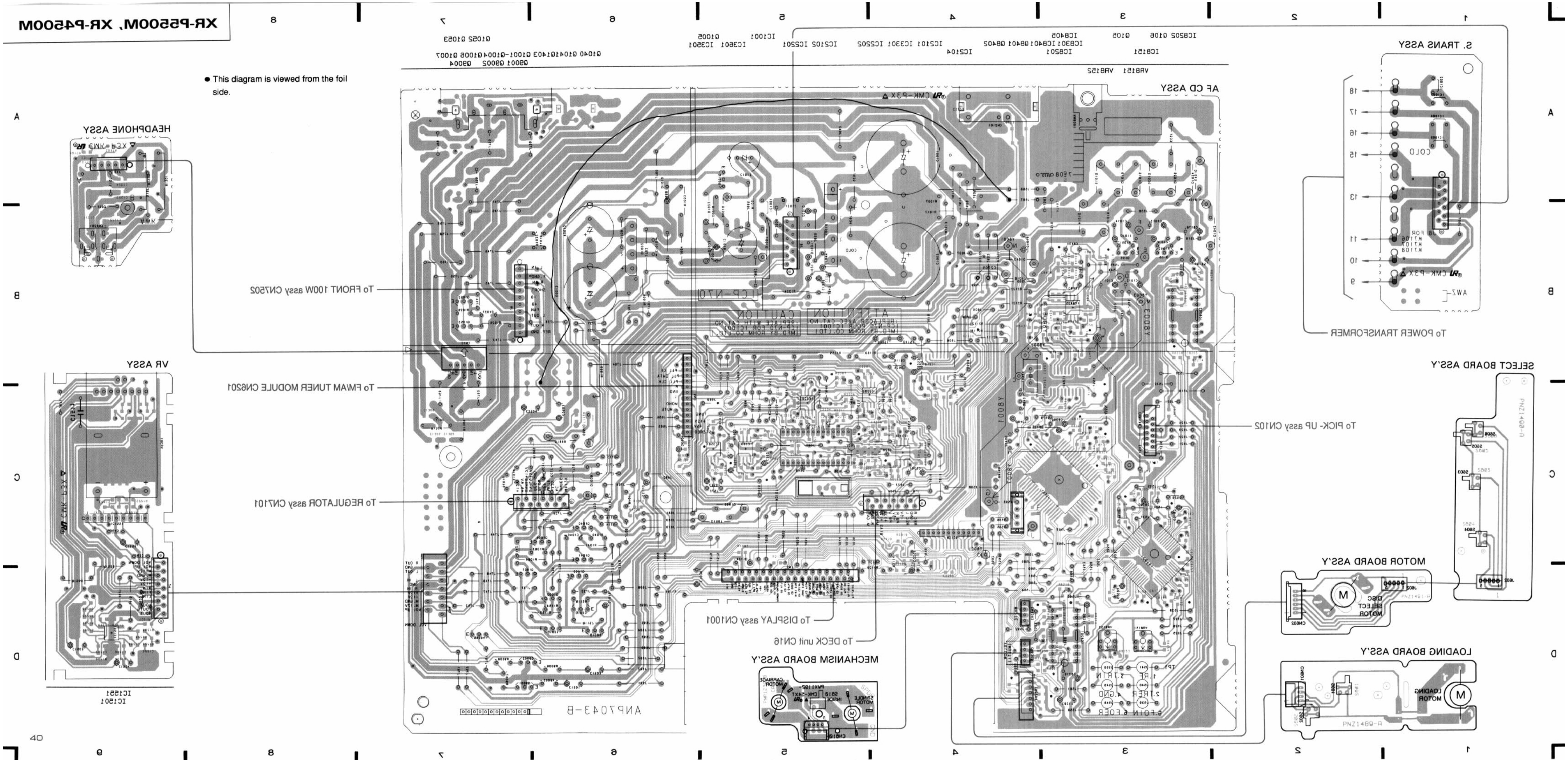


- This diagram is viewed from the mounted parts side.

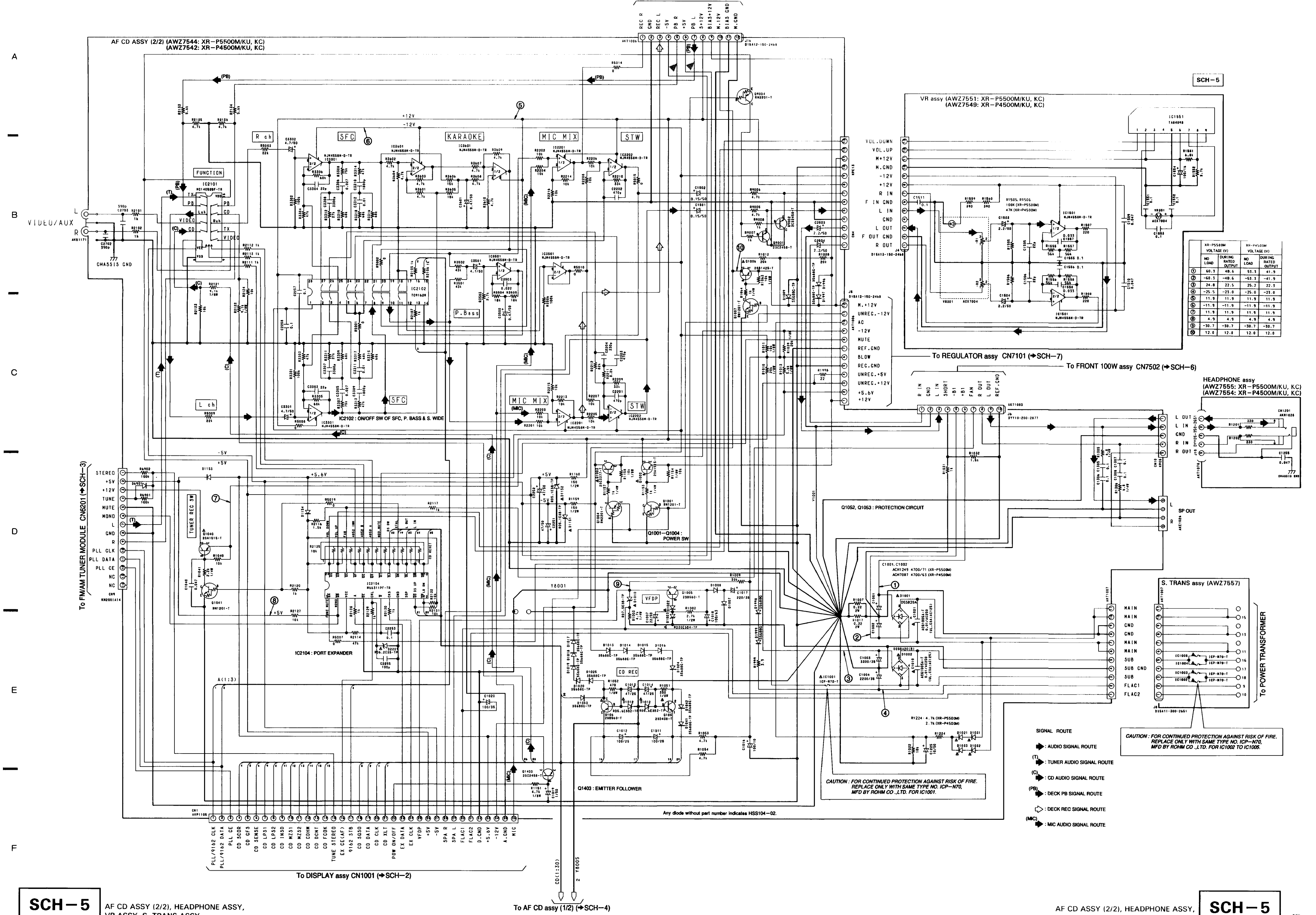

1
2
3
4
5
6
7
8
9
A
B
C
D
S. TRANS ASSY
COLD
FOR K7106 K7107 K7108
CMK-P3X
AWZ
18
17
16
15
13
11
10
9
To POWER TRANSFORMER
SELECT BOARD ASS'Y
PNZ1498-A
S606
S605
S603
S604
J602
MOTOR BOARD ASS'Y
DISC SELECT MOTOR
M
CN602
LOADING BOARD ASS'Y
LOADING MOTOR
M
CN601
IC8202 Q106
Q105
IC8151
IC8405
IC8301 IC8401 Q8401 Q8402
IC8201
IC2104
IC2101 IC3301 IC2202
IC2102 IC2201
IC1001
Q1005
IC3601 IC3501
Q1052 Q1053
Q1040 Q1041 Q1403 Q1001–Q1004 Q1006 Q1007
Q9001 Q9002 Q9004
VR8151 VR8152
AF CD ASSY
CMK-P3X
COLD
ATTENTION
REPLACER AVEC CAT.NO. CP-N70 POUR IC1001 (MFD.BY ROHM CO.,LTD)
CAUTION
REPLACE WITH CAT.NO. CP-N70 FOR IC1001 (MFD.BY ROHM CO.,LTD.)
CP-N70
Y8003
Y8001
TP1
1.RF
2.TRER
3.TRIN
4.GND
5.FOIN
6.FOER
ANP7043-B
To PICK- UP assy CN102
To DISPLAY assy CN1001
To DECK unit CN16
MECHANISM BOARD ASS'Y
SPINDLE MOTOR
CARRIAGE MOTOR
S618 INSIDE
PVX1192-
CMK-54XT
CN618
To FRONT 100W assy CN7502
To FM/AM TUNER MODULE CN6201
To REGULATOR assy CN7101
HEADPHONE ASSY
CMK-P3X
AWK
VR ASSY
C1511
CMK-P3X
IC1551
IC1501

XR-P550M, XR-P450M

- This diagram is viewed from the foil side.



AF CD ASSY
HEADPHONE ASSY
VR ASSY
S. TRANS ASSY
SELECT BOARD ASS'Y
MOTOR BOARD ASS'Y
LOADING BOARD ASS'Y
MECHANISM BOARD ASS'Y
To FRONT 100W assy CN7502
To FM/AM TUNER MODULE CN8201
To REGULATOR assy CN7101
To POWER TRANSFORMER
To PICK-UP assy CN102
To DISPLAY assy CN1001
To DECK unit CN16
Q1052 Q1053
Q1040 Q1041Q1403 Q1001-Q1004Q1006 Q1007
Q9001 Q9002 Q9004
IC1001 Q1005
IC3601 IC3501
IC2102 IC2201
IC2101 IC3301 IC2202
IC2104
IC8405
IC8301 IC8401 Q8401 Q8402
IC8201
Q105
IC8202 Q106
IC8151
VR8151 VR8152
CMK-P3X
CMK-P3X
CMK-P3X
CMK-P3X
ANP7043-B
PNZ1480-A
PNZ1460-A
CAUTION
ATTENTION
DISC SELECT MOTOR
LOADING MOTOR
CARRIAGE MOTOR
SPINDLE MOTOR
IC1551
IC1501
A
B
C
D
1
2
3
4
5
6
7
8
9
9
10
11
13
15
16
17
18


To DECK unit CN16 (➔SCH-8)
REC R
GND
REC L
-5V
PB R
+5V
PB L
S+12V
BIAS+12V
M.12V
BIAS GND
M.GND
AF CD ASSY (2/2) (AWZ7544: XR-P5500M/KU, KC)
(AWZ7542: XR-P4500M/KU, KC)
VIDEO/AUX
L
R
CHASSIS GND
FUNCTION
IC2101
R ch
L ch
SFC
KARAOKE
MIC MIX
STW
P.Bass
IC2102
IC2102 : ON/OFF SW OF SFC, P. BASS & S. WIDE
+12V
-12V
(PB)
(T)
(C)
(MIC)
VR assy (AWZ7551: XR-P5500M/KU, KC)
(AWZ7549: XR-P4500M/KU, KC)
IC1551
VR301
IC1501
VOL.DOWN
VOL.UP
M+12V
M.GND
-12V
+12V
R IN
F IN GND
L IN
GND
L OUT
F OUT GND
R OUT
M.+12V
UNREC.-12V
AC
-12V
MUTE
REF.GND
BLOW
REC.GND
UNREC.+5V
UNREC.+12V
+5.6V
+12V
To REGULATOR assy CN7101 (➔SCH-7)
To FRONT 100W assy CN7502 (➔SCH-6)
R IN
GND
L IN
SHORT
-B1
+B1
FAN
R OUT
L OUT
REF.GND
HEADPHONE assy
(AWZ7555: XR-P5500M/KU, KC)
(AWZ7554: XR-P4500M/KU, KC)
L OUT
L IN
GND
R IN
R OUT
SP OUT
L
R
To FM/AM TUNER MODULE CN6201 (➔SCH-3)
STEREO
+5V
+12V
TUNE
MUTE
MONO
L
GND
R
PLL CLK
PLL DATA
PLL CE
NC
NC
TUNER REC SW
-5V
+5V
+5.6V
IC2104 : PORT EXPANDER
Q1001–Q1004 : POWER SW
Q1052, Q1053 : PROTECTION CIRCUIT
C1001, C1002
ACH1249 4700/71 (XR-P5500M)
ACH7087 4700/63 (XR-P4500M)
VFDP
CD REC
Y8001
R1224 : 4.7k (XR-P5500M)
2.7k (XR-P4500M)
Q1403 : EMITTER FOLLOWER
Any diode without part number indicates HSS104-02.
S. TRANS assy (AWZ7557)
MAIN
MAIN
GND
GND
MAIN
MAIN
SUB
SUB GND
SUB
FLAC1
FLAC2
To POWER TRANSFORMER
PLL/9162 CLK
PLL/9162 DATA
PLL CE
CD SCOR
CD GFS
CD SENSE
CD LPS1
CD LPS2
CD INSD
CD MZS1
CD MZS2
CD CDHM
CD DCNT
CD FCOK
TUNE STEREO
EX CE(AF)
9162 STB
CD SQSO
CD DATA
CD CLK
CD XLT
POW ON/OFF
EX DATA
EX CLK
VFDP
+5V
-5V
SPA R
SPA L
FLAC1
FLAC2
D.GND
+5.6V
-12V
A.GND
MIC
To DISPLAY assy CN1001 (➔SCH-2)
CD(1:30)
Y8005
To AF CD assy (1/2) (➔SCH-4)
SIGNAL ROUTE
: AUDIO SIGNAL ROUTE
(T) : TUNER AUDIO SIGNAL ROUTE
(C) : CD AUDIO SIGNAL ROUTE
(PB) : DECK PB SIGNAL ROUTE
: DECK REC SIGNAL ROUTE
(MIC) : MIC AUDIO SIGNAL ROUTE

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N70, MFD BY ROHM CO.,LTD. FOR IC1001.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. ICP-N70, MFD BY ROHM CO.,LTD. FOR IC1002 TO IC1005.

	XR-P5500M VOLTAGE (V)		XR-P4500M VOLTAGE (V)	
	NO LOAD	DURING RATED OUTPUT	NO LOAD	DURING RATED OUTPUT
①	60.3	48.6	53.3	41.9
②	-60.3	-48.6	-53.3	-41.9
③	24.8	22.5	25.2	22.3
④	-25.5	-23.0	-25.0	-23.0
⑤	11.9	11.9	11.9	11.9
⑥	-11.9	-11.9	-11.9	-11.9
⑦	11.9	11.9	11.9	11.9
⑧	4.9	4.9	4.9	4.9
⑨	-30.7	-30.7	-30.7	-30.7
⑩	12.0	12.0	12.0	12.0

SCH-5

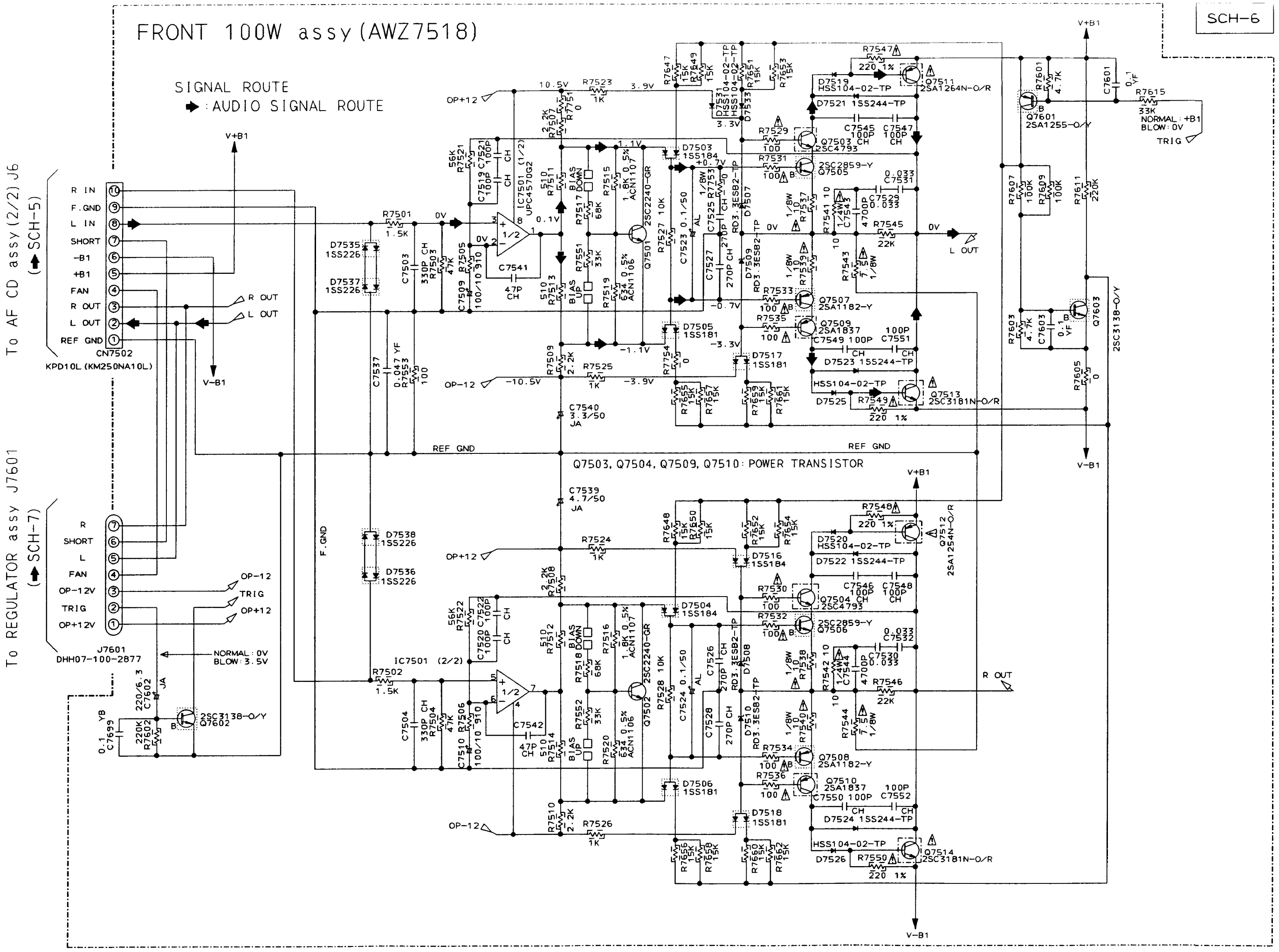
SCH-5

AF CD ASSY (2/2), HEADPHONE ASSY,
VR ASSY, S. TRANS ASSY

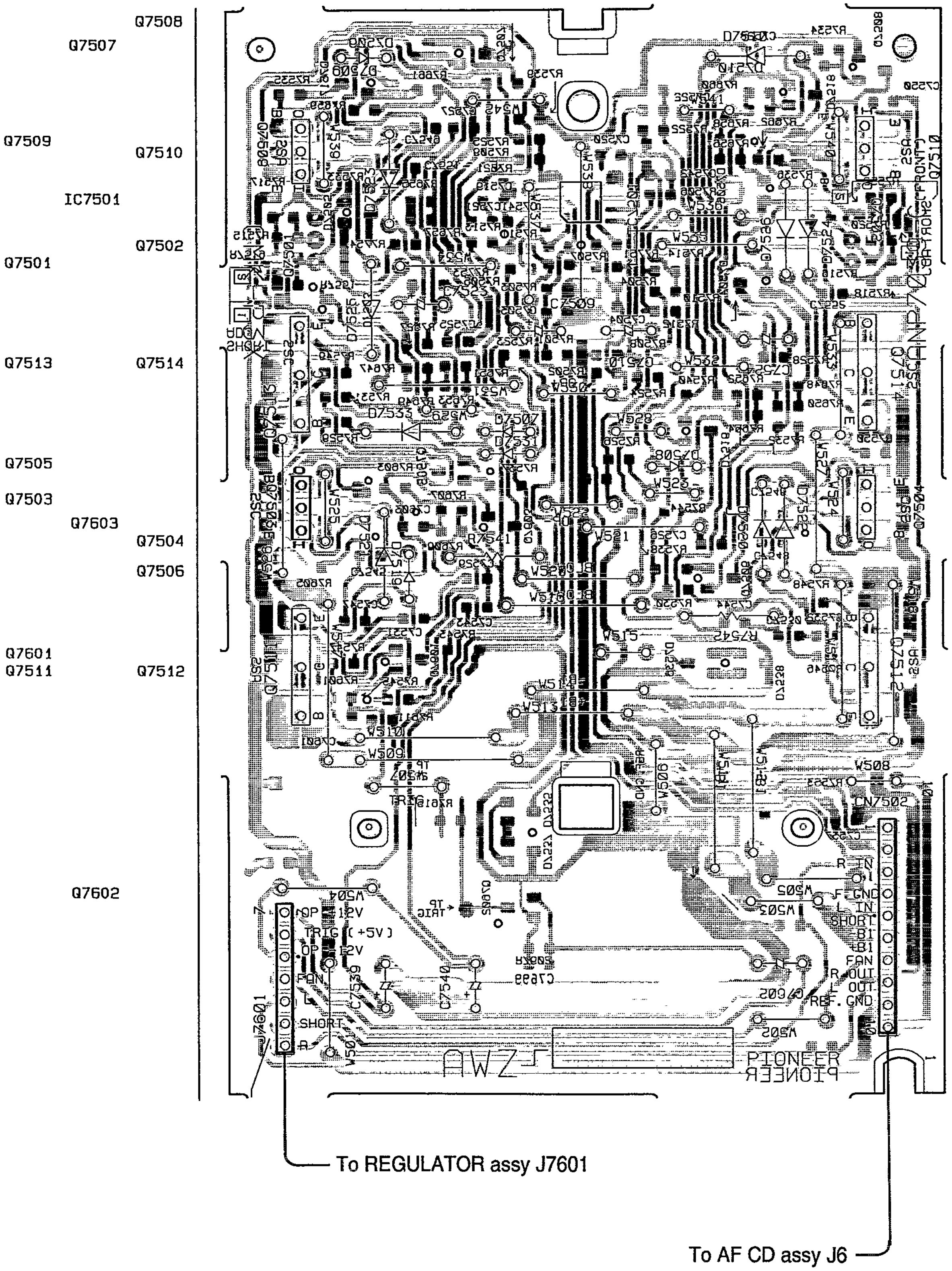
AF CD ASSY (2/2), HEADPHONE ASSY,
VR ASSY, S. TRANS ASSY

SCH-5

4.5 FRONT 100W ASSY

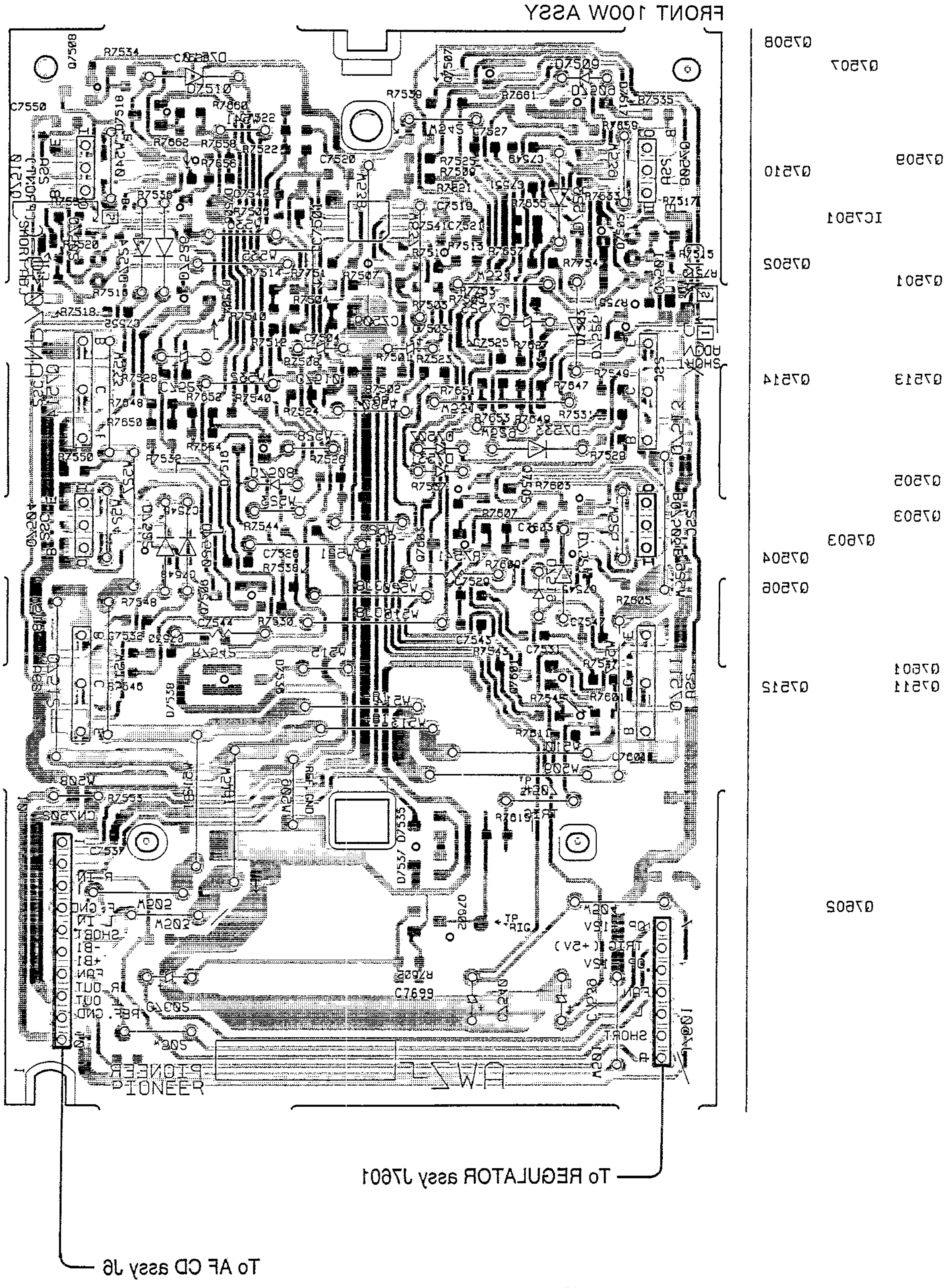

FRONT 100W assy (AWZ7518)
SCH-6
SIGNAL ROUTE
➡ : AUDIO SIGNAL ROUTE
To AF CD assy (2/2) J6
(➡ SCH-5)
R IN
F.GND
L IN
SHORT
-B1
+B1
FAN
R OUT
L OUT
REF GND
CN7502
KPD10L (KM250NA10L)
To REGULATOR assy J7601
(➡ SCH-7)
R
SHORT
L
FAN
OP-12V
TRIG
OP+12V
J7601
DHH07-100-2877
NORMAL: 0V
BLOW: 3.5V
OP-12
TRIG
OP+12
R OUT
L OUT
V+B1
V-B1
C7699 0.1 YB
R7602 220K
C7602 220/6.3 JA
Q7602 2SC3138-O/Y
F.GND
REF GND
D7535 1SS226
D7537 1SS226
D7536 1SS226
D7538 1SS226
C7537 0.047 YF
R7553 100
R7501 1.5K
R7502 1.5K
C7503 330P CH
C7504 330P CH
R7503 47K
R7504 47K
C7509 100/10
C7510 100/10
R7505 910
R7506 910
C7541 47P CH
C7542 47P CH
IC7501 (1/2) UPC4570G2
IC7501 (2/2)
R7521 56K
R7522 56K
C7519 100P CH
C7521 100P CH
C7520 100P CH
C7522 100P CH
R7511 510
R7512 510
R7513 510
R7514 510
R7507 2.2K
R7508 2.2K
R7509 2.2K
R7510 2.2K
R7751 0
R7523 1K
R7524 1K
R7525 1K
R7526 1K
OP+12
OP-12
10.5V
-10.5V
3.9V
-3.9V
0V
0.1V
1.1V
-1.1V
+0.7V
-0.7V
3.3V
-3.3V
BIAS DOWN
BIAS UP
R7517 68K
R7518 68K
R7551 33K
R7552 33K
R7515 1.8K 0.5% ACN1107
R7516 1.8K 0.5% ACN1107
R7519 634 0.5% ACN1106
R7520 634 0.5% ACN1106
Q7501 2SC2240-GR
Q7502 2SC2240-GR
R7527 10K
R7528 10K
C7523 0.1/50 AL
C7524 0.1/50 AL
C7527 270P CH
C7528 270P CH
C7525 270P CH
C7526 270P CH
R7753 0
R7754 0
D7503 1SS184
D7504 1SS184
D7505 1SS181
D7506 1SS181
D7507 RD3.3ESB2-TP
D7508 RD3.3ESB2-TP
D7509 RD3.3ESB2-TP
D7510 RD3.3ESB2-TP
C7539 4.7/50 JA
C7540 3.3/50 JA
R7647 15K
R7648 15K
R7649 15K
R7650 15K
R7651 15K
R7652 15K
R7653 15K
R7654 15K
R7655 15K
R7656 15K
R7657 15K
R7658 15K
R7659 15K
R7660 15K
R7661 15K
R7662 15K
D7531 HSS104-02-TP
D7533 HSS104-02-TP
D7515 1SS184
D7516 1SS184
D7517 1SS181
D7518 1SS181
R7529 100
R7530 100
R7531 100
R7532 100
R7533 100
R7534 100
R7535 100
R7536 100
Q7503 2SC4793
Q7504 2SC4793
Q7505 2SC2859-Y
Q7506 2SC2859-Y
Q7507 2SA1182-Y
Q7508 2SA1182-Y
Q7509 2SA1837
Q7510 2SA1837
R7537 1/8W 10
R7538 1/8W 10
R7539 1/8W 10
R7540 1/8W 10
R7541 10 1/4W
R7542 10 1/4W
C7543 4700P
C7544 4700P
C7529 0.033
C7530 0.033
C7531 0.033
C7532 0.033
R7543 7.5 1/8W
R7544 7.5 1/8W
R7545 22K
R7546 22K
C7545 100P CH
C7546 100P CH
C7547 100P CH
C7548 100P CH
C7549 100P CH
C7550 100P CH
C7551 100P CH
C7552 100P CH
D7519 HSS104-02-TP
D7520 HSS104-02-TP
D7521 1SS244-TP
D7522 1SS244-TP
D7523 1SS244-TP
D7524 1SS244-TP
D7525 HSS104-02-TP
D7526 HSS104-02-TP
R7547 220 1%
R7548 220 1%
R7549 220 1%
R7550 220 1%
Q7511 2SA1264N-O/R
Q7512 2SA1254N-O/R
Q7513 2SC3181N-O/R
Q7514 2SC3181N-O/R
Q7503, Q7504, Q7509, Q7510 : POWER TRANSISTOR
Q7601 2SA1255-O/Y
R7601 4.7K
C7601 0.1 YF
R7615 33K
NORMAL: +B1
BLOW: 0V
TRIG
R7607 100K
R7609 100K
R7611 220K
R7603 4.7K
C7603 0.1 YF
Q7603 2SC3138-O/Y
R7605 0

FRONT 100W ASSY


Q7508
Q7507
Q7509
Q7510
IC7501
Q7502
Q7501
Q7513
Q7514
Q7505
Q7503
Q7603
Q7504
Q7506
Q7601
Q7511
Q7512
Q7602
CN7502
R IN
F GND
L IN
SHORT
B1
B1
FAN
R OUT
L OUT
REF. GND
J7601
OP 12V
TRIG (+5V)
OP 12V
FAN
L
SHORT
R
TP TRIG
PIONEER
AWZ
To REGULATOR assy J7601
To AF CD assy J6

- This diagram is viewed from the mounted parts side.

FRONT 100W ASSY


Q7508
Q7507
Q7509
Q7510
IC7501
Q7502
Q7501
Q7514
Q7513
Q7505
Q7503
Q7603
Q7504
Q7506
Q7601
Q7511
Q7512
Q7602
CN7502
R IN
L IN
SHORT
-B1
+B1
FAN
R OUT
L OUT
REF. GND
12V
TRIG (+5V)
SHORT
PIONEER
AWZ
To REGULATOR assy J7601
To AF CD assy J6

- This diagram is viewed from the foil side.

4.6 REGULATOR ASSY

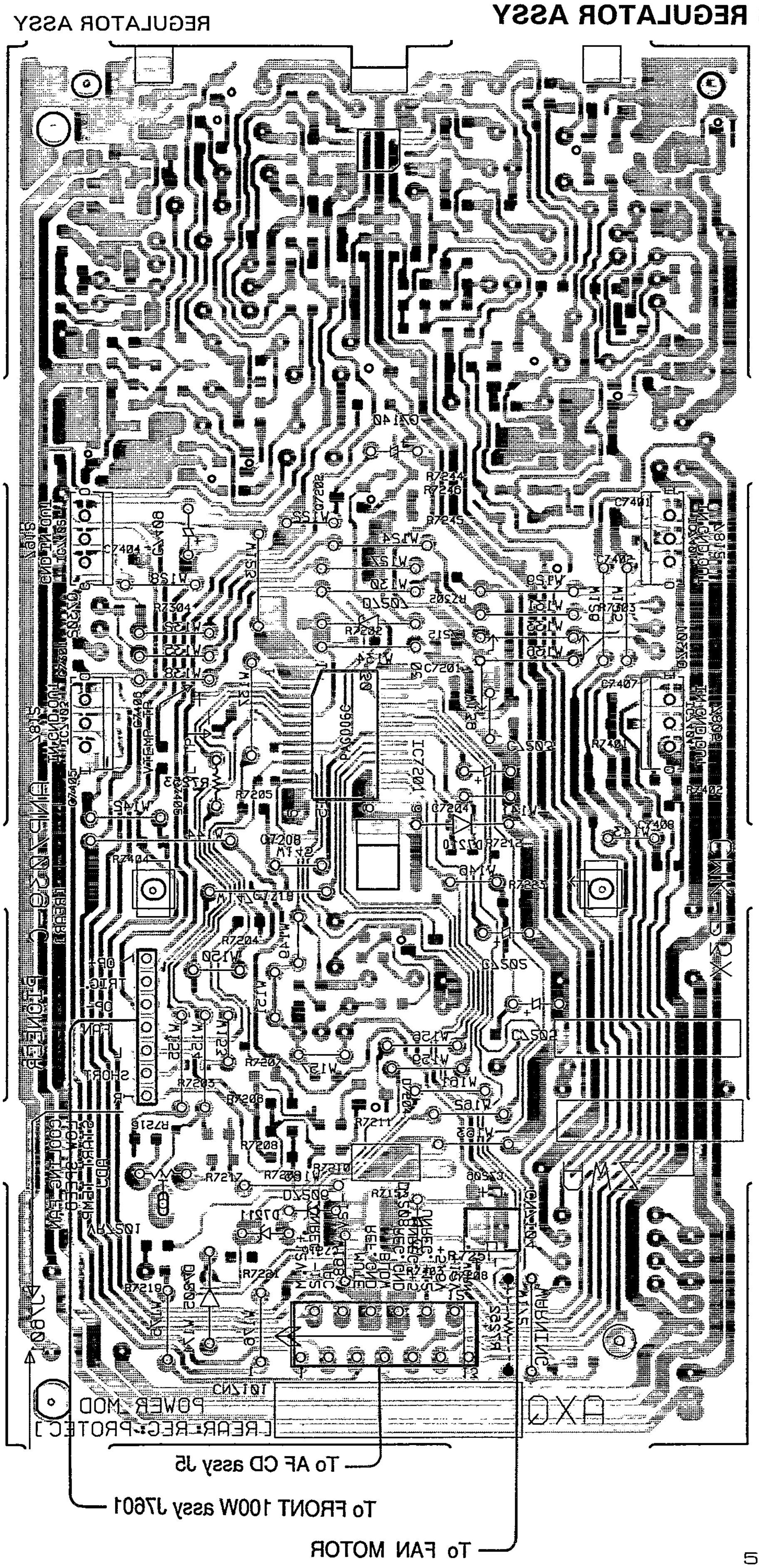
Q7202

IC7401 IC7402

Q7301
Q7302

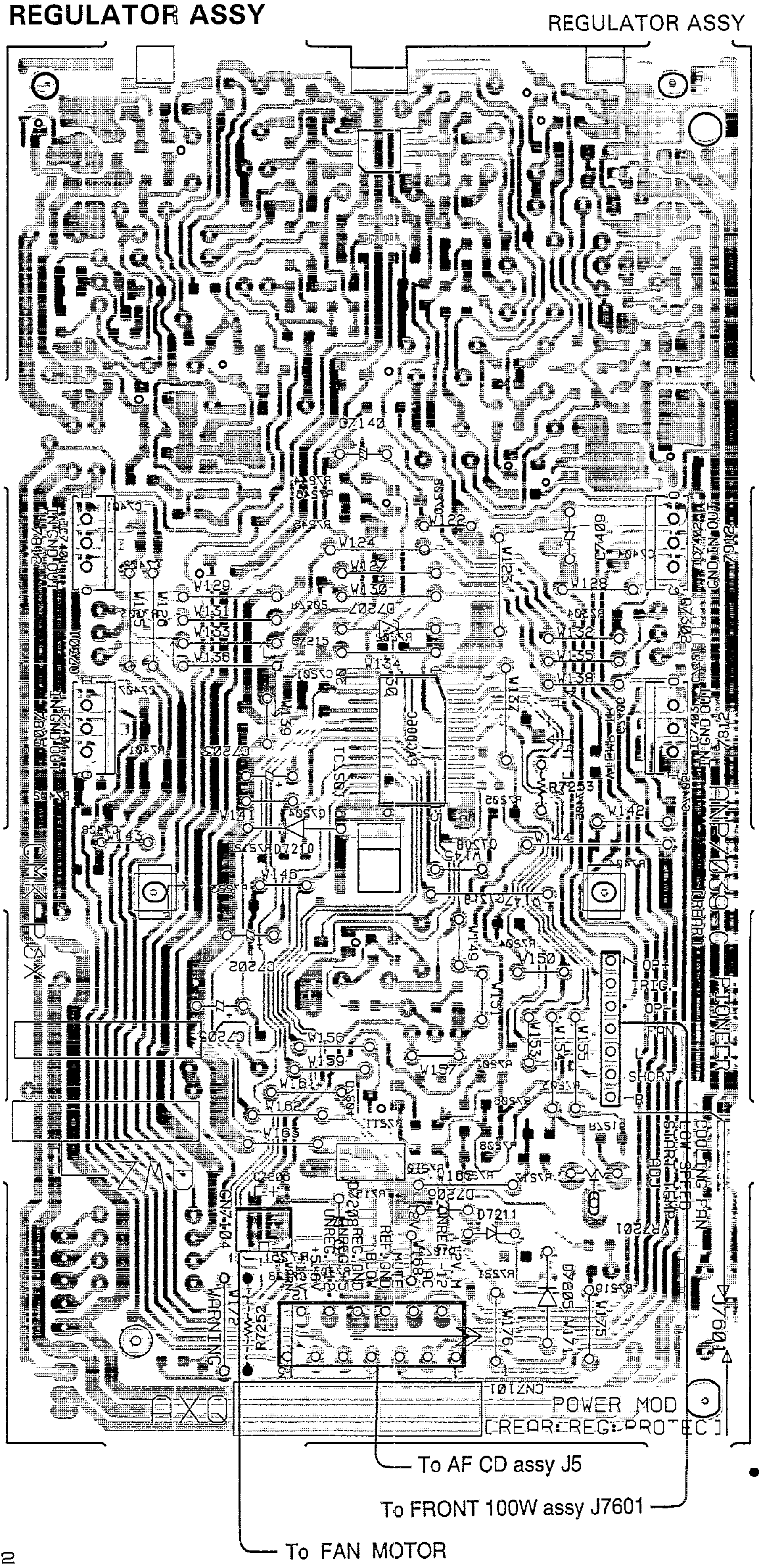
IC7404 IC7403
IC7201

VR7201


REGULATOR ASSY
POWER MOD
[REAR:REG:PROTEC]
CN7101
To AF CD assy J5
To FRONT 100W assy J7601
To FAN MOTOR

- This diagram is viewed from the foil side.

4.6 REGULATOR ASSY


REGULATOR ASSY
Q7140
W122
W124
W127
W129
W130
W131
W133
W134
W135
W136
W137
W138
W128
W132
D7207
C7215
C7409
W141
W142
W143
W144
W146
D7210
W149
W150
W151
W153
W154
W155
W156
W157
W159
W161
W162
W163
Q7208
R7253
OP
TRIG
OP
FAN
SHORT
R
PIONEER
COOLING FAN
LOW SPEED
SHORT ADJ
TEMP ADJ
VR7201
CN7104
WARNING
R7252
W172
W175
W176
D7205
D7211
D7206
D7208
Q7165
UNREG +5.6V
GND
REG. GND
UNREG. GND
REF GND
MUTE
BLOW
B. REMOTE
ACC
-12V
+12V
UNREG
J7601
CN7101
POWER MOD
[REAR:REG:PROTEC]
AXQ
To AF CD assy J5
To FRONT 100W assy J7601
To FAN MOTOR

Q7202

IC7401 IC7402

Q7301

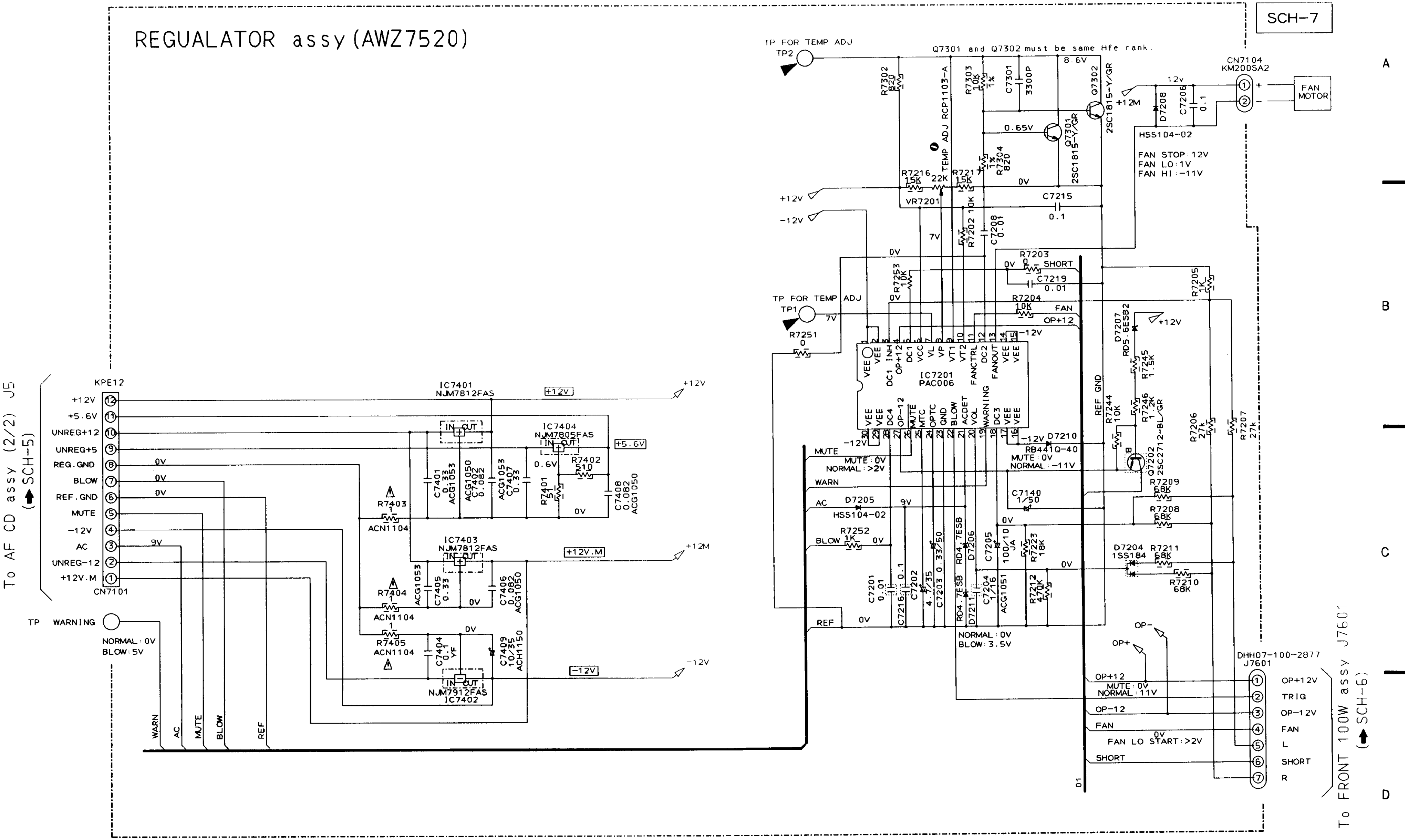
Q7302

IC7404 IC7403

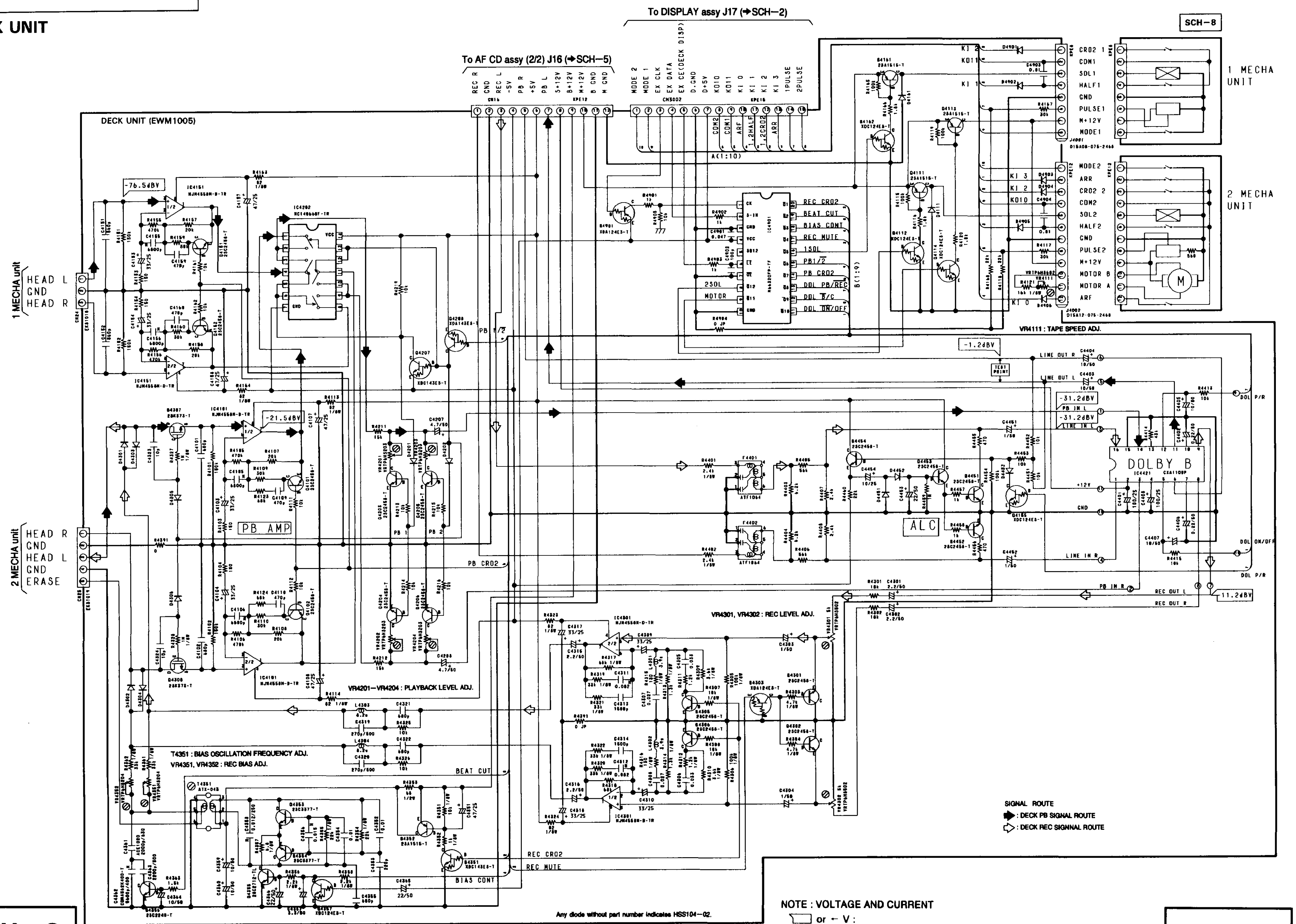
IC7201

VR7201

- This diagram is viewed from the mounted parts side.


REGUALATOR assy (AWZ7520)
SCH-7
To AF CD assy (2/2) J5
(➡ SCH-5)
KPE12
+12V ⑫
+5.6V ⑪
UNREG+12 ⑩
UNREG+5 ⑨
REG.GND ⑧
BLOW ⑦
REF.GND ⑥
MUTE ⑤
-12V ④
AC ③
UNREG-12 ②
+12V.M ①
CN7101
TP WARNING
NORMAL: 0V
BLOW: 5V
IC7401 NJM7812FAS
IC7404 NJM7805FAS
IC7403 NJM7812FAS
IC7402 NJM7912FAS
IN OUT
C7401 0.33 ACG1053
C7402 0.082 ACG1050
C7407 0.33 ACG1053
R7401 51
R7402 510
C7408 0.082 ACG1050
R7403 1 ACN1104
R7404 1 ACN1104
R7405 1 ACN1104
C7405 0.33 ACG1053
C7406 0.082 ACG1050
C7404 0.1 YF
C7409 10/35 ACH1150
+12V
+5.6V
+12V.M
-12V
+12M
0.6V
0V
9V
WARN
AC
MUTE
BLOW
REF
TP FOR TEMP ADJ
TP2
TP1
7V
R7251 0
Q7301 and Q7302 must be same Hfe rank.
R7302 820
TEMP ADJ RCP1103-A
R7303 10K 1%
C7301 3300P
8.6V
Q7302 2SC1815-Y/GR
Q7301 2SC1815-Y/GR
0.65V
R7304 820 1%
R7216 15K
22K
VR7201
R7217 15K
C7215 0.1
R7202 10K
C7208 0.01
R7253 10K
R7203 0
SHORT
C7219 0.01
R7204 10K
FAN
OP+12
IC7201 PAC006
VEE
DC1 INH
OP+12
DC1
VCC
VL
VP
VT1
VT2
FANCTRL
DC2
FANOUT
DC4
OP-12
MUTE
MTC
OPTC
GND
ACDET
VOL
WARNING
DC3
-12V
MUTE: 0V
NORMAL: >2V
D7210 RB441Q-40
MUTE: 0V
NORMAL: -11V
C7140 1/50
D7205 HSS104-02
R7252 1K
C7201 0.01
C7216 0.1
C7202 4.7/35
C7203 0.33/50
RD4.7ESB
D7206
D7211
C7204 1/16
ACG1051
C7205 100/10 JA
R7223 18K
R7212 470K
NORMAL: 0V
BLOW: 3.5V
REF GND
R7244 10K
D7207 RD5.6ESB2
R7245 1.5K
R7246 1.2K
Q7202 2SC2712-BL/GR
R7209 68K
R7208 68K
D7204 1SS184
R7211 68K
R7210 68K
R7205 1K
R7206 27k
R7207 27k
+12M
12v
D7208
C7206 0.1
HSS104-02
FAN STOP: 12V
FAN LO: 1V
FAN HI: -11V
CN7104 KM200SA2
FAN MOTOR
+
-
OP+
OP-
01
OP+12
MUTE: 0V
NORMAL: 11V
OP-12
FAN
FAN LO START: >2V
SHORT
DHH07-100-2877
J7601
OP+12V
TRIG
OP-12V
FAN
L
SHORT
R
To FRONT 100W assy J7601
(➡ SCH-6)

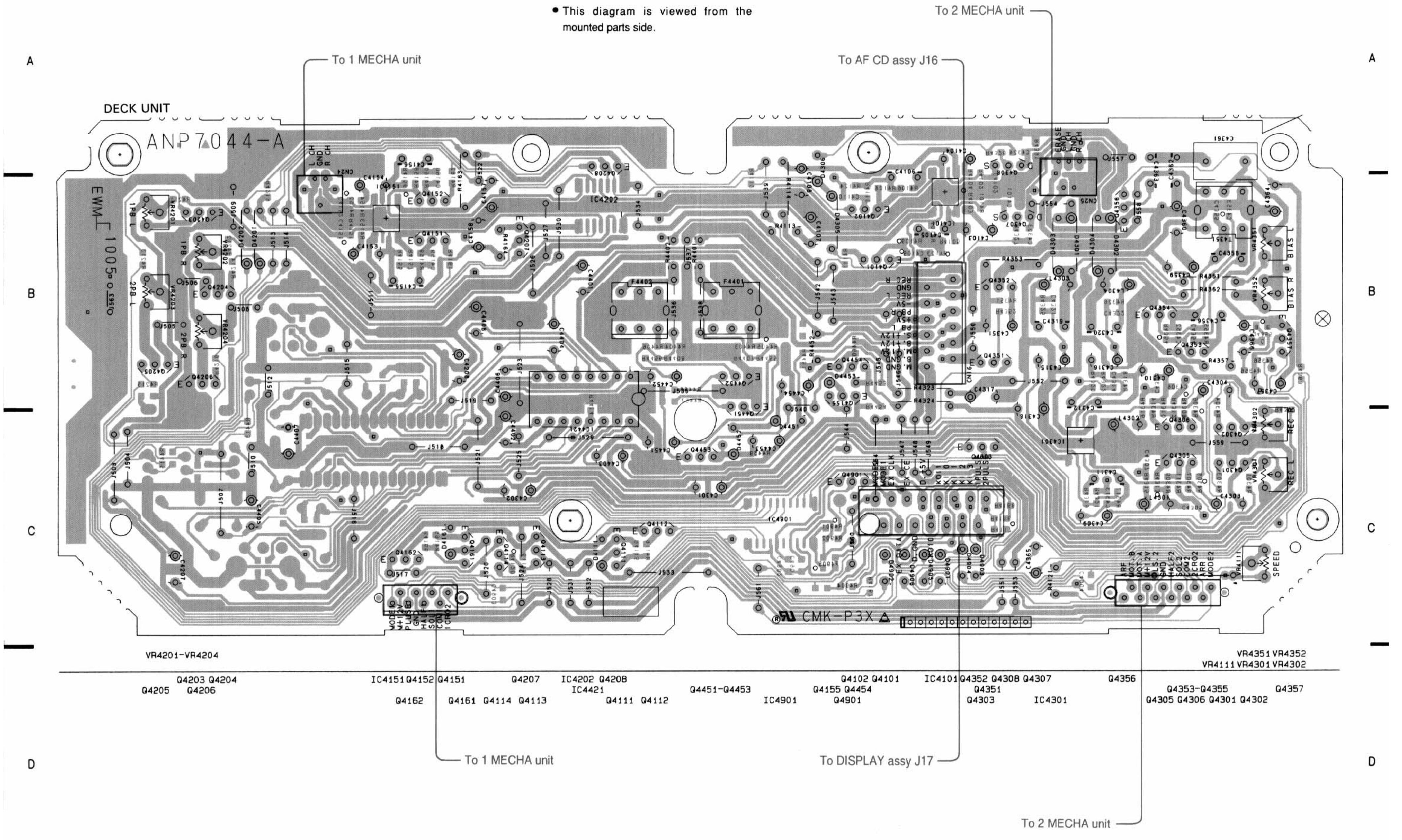
4.7 DECK UNIT


To DISPLAY assy J17 (→SCH−2)
To AF CD assy (2/2) J16 (→SCH−5)
DECK UNIT (EWM1005)
REC R
GND
REC L
-5V
PB R
+5V
PB L
S+12V
B+12V
M+12V
B GND
M GND
MODE 2
MODE 1
EX CLK
EX DATA
EX CE(DECK DISP)
D.GND
D+5V
KD10
KD11
KI 0
KI 1
KI 2
KI 3
1PULSE
2PULSE
COM2
COM1
ARF
1,2HALF
1,2CRO2
ARR
A(1:10)
B(1:9)
1 MECHA unit
HEAD L
GND
HEAD R
2 MECHA unit
HEAD R
GND
HEAD L
GND
ERASE
-76.54dBV
-21.54dBV
PB AMP
IC4151 NJM4558M-D-TR
IC4101 NJM4558M-D-TR
IC4202 NC14066BF-TR
IC4901 M66320FP-TF
REC CRO2
BEAT CUT
BIAS CONT
REC MUTE
1SOL
PB1/2
PB CRO2
DDL PB/REC
DDL T/C
DDL ON/OFF
2SOL
MOTOR
PB 1/2
PB 1
PB 2
VR4201–VR4204 : PLAYBACK LEVEL ADJ.
VR4111 : TAPE SPEED ADJ.
-1.2dBV
TEST POINT
LINE OUT R
LINE OUT L
-31.2dBV
PB IN L
-31.2dBV
LINE IN L
DOLBY B
IC4421 CXA1100P
+12V
GND
LINE IN R
PB IN R
REC OUT L
REC OUT R
-11.2dBV
DDL P/R
DDL ON/OFF
DDL P/R
ALC
VR4301, VR4302 : REC LEVEL ADJ.
IC4301 NJM4558M-D-TR
T4351 : BIAS OSCILLATION FREQUENCY ADJ.
VR4351, VR4352 : REC BIAS ADJ.
BEAT CUT
REC CRO2
REC MUTE
BIAS CONT
Any diode without part number indicates HSS104−02.
SIGNAL ROUTE
: DECK PB SIGNAL ROUTE
: DECK REC SIGNAL ROUTE
CRO2 1
COM1
SOL1
HALF1
GND
PULSE1
M+12V
MODE1
1 MECHA UNIT
MODE2
ARR
CRO2 2
COM2
SOL2
HALF2
GND
PULSE2
M+12V
MOTOR B
MOTOR A
ARF
2 MECHA UNIT
M
SCH-8

NOTE : VOLTAGE AND CURRENT

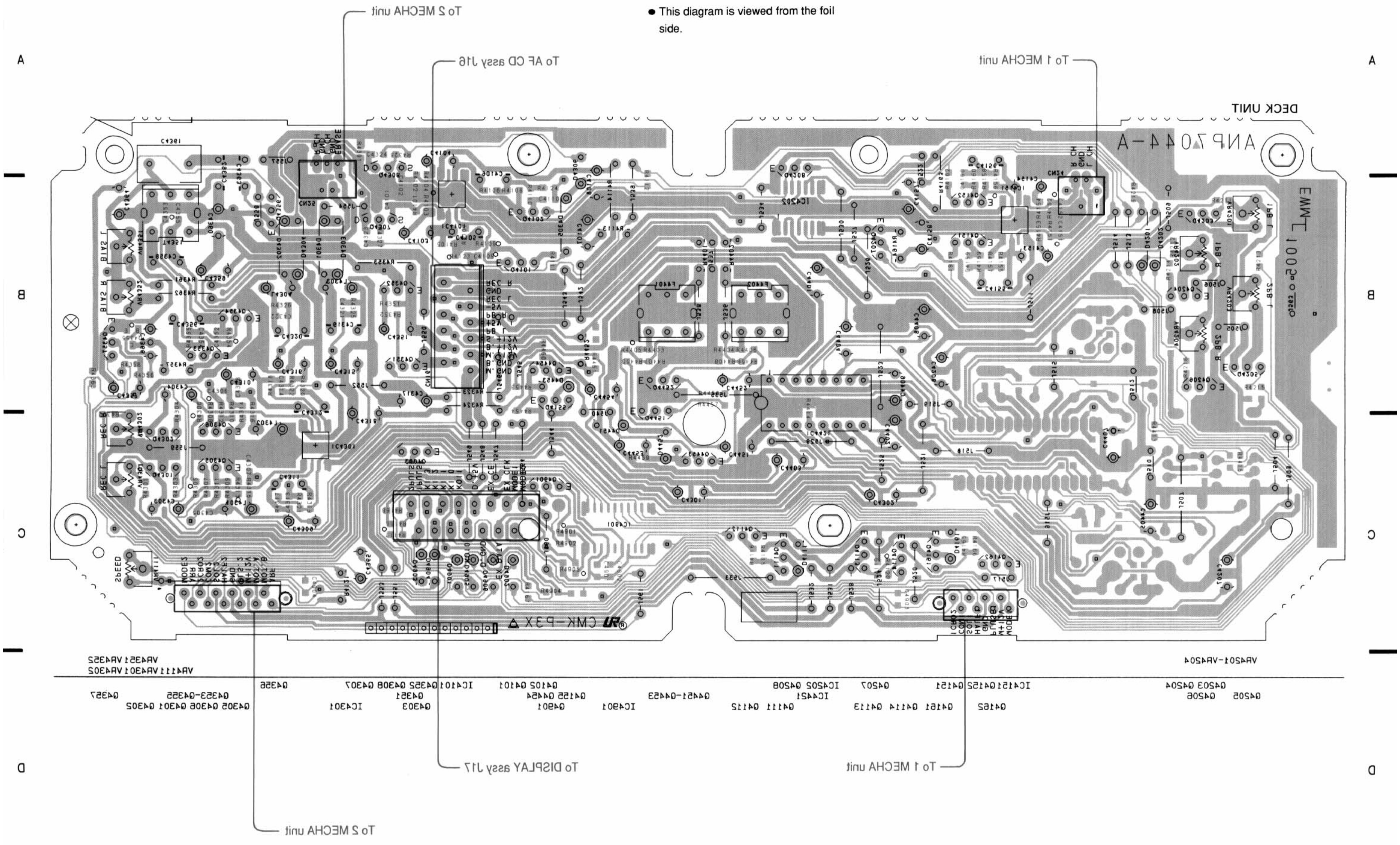
▭ or ← V :
DC voltage (V) in STOP mode unless otherwise noted.

⇦ mA or ← mA :
DC current in STOP mode unless otherwise noted.


DECK UNIT
ANP7044-A
EWM 1005
CMK-P3X
To 1 MECHA unit
To AF CD assy J16
To 2 MECHA unit
To 1 MECHA unit
To DISPLAY assy J17
To 2 MECHA unit
L CH
GND
R CH
ERASE
GND
L CH
R CH
MODE
M+12V
PLUS1
GND
HALF1
SOL1
COM1
1CRO2
ARF
MOT. B
MOT. A
M+12V
PLS. 2
GND
HALF2
SOL2
COM2
2CRO2
ARR
MODE2
SPEED
BIAS L
BIAS R
REC R
REC L
1PB L
1PB R
2PB L
2PB R
VR4201-VR4204
VR4351 VR4352
VR4111 VR4301 VR4302
Q4203 Q4204
Q4205 Q4206
IC4151 Q4152 Q4151
Q4162
Q4161 Q4114 Q4113
Q4207
IC4202 Q4208
IC4421
Q4111 Q4112
Q4451-Q4453
IC4901
Q4102 Q4101
Q4155 Q4454
Q4901
IC4101 Q4352 Q4308 Q4307
Q4351
Q4303
IC4301
Q4356
Q4353-Q4355
Q4305 Q4306 Q4301 Q4302
Q4357

- This diagram is viewed from the mounted parts side.

- This diagram is viewed from the foil side.


DECK UNIT
To 2 MECHA unit
To AF CD assy J16
To 1 MECHA unit
To DISPLAY assy J17
To 1 MECHA unit
To 2 MECHA unit
ANP7044-A
CMK-P3X
VRA4351 VRA4352
VRA4111 VRA4301 VRA4302
Q4357
Q4353–Q4355
Q4305 Q4306 Q4301 Q4302
Q4356
IC4301
IC4101 Q4352 Q4308 Q4307
Q4351
Q4303
Q4102 Q4101
Q4155 Q4154
Q4901
IC4901
Q4451–Q4453
IC4202 Q4208
IC4421
Q4111 Q4112
Q4207
IC4151 Q4152 Q4151
Q4113 Q4114 Q4161
Q4162
VRA4201–VRA4204
Q4203 Q4204
Q4206 Q4205

5. PCB PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10^1 → 561 ························ RD1/8PM $\boxed{5}\ \boxed{6}\ \boxed{1}$ *J*
47kΩ → 47 × 10^3 → 473 ························ RD1/4PS $\boxed{4}\ \boxed{7}\ \boxed{3}$ *J*
0.5Ω → 0R5 ·· RN2H $\boxed{0}\ \boxed{R}\ \boxed{5}$ *K*
1Ω → 010 ·· RS1P $\boxed{0}\ \boxed{1}\ \boxed{0}$ *K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10^1 → 5621 ················· RM1/4PC $\boxed{5}\ \boxed{6}\ \boxed{2}\ \boxed{1}$ *F*

LIST OF ASSEMBLIES

Mark	No.	Description	Parts No.
		FM/AM TUNER MODULE	AXQ1012
		AF ASS'Y	AWK7018
		├─AF CD ASSY	AWZ7544
		├─VR ASSY	AWZ7551
NSP		├─HEADPHONE ASSY	AWZ7555
NSP		└─S. TRANS ASSY	AWZ7557
NSP		COMPLEX ASS'Y	AWM7147
		├─DISPLAY ASSY	AWZ7525
		├─PRIMARY ASSY	AWZ7535
		├─SW ASSY	AWZ7537
		└─MIC ASSY	AWZ7539
		POWER AMP MODULE	AXQ7017
		├─FRONT 100W ASSY	AWZ7518
		└─REGULATOR ASSY	AWZ7520
		CASSETTE MOD. B	EXK2435
		└─DECK UNIT	EWM1005
		MULTI MECHA ASSY	AXA7006
NSP		├─LOADING BOARD ASS'Y	AWZ7207
NSP		├─MOTOR BOARD ASS'Y	AWZ7208
NSP		├─SELECT BOARD ASS'Y	AWZ7209
NSP		└─MECHANISM BOARD ASS'Y	PWX1192

FM/AM TUNER MODULE

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101, D6102		1T33

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L6104		ATC1003
	L6101		ATC1020
	L6102		ATC1021
	T6101		ATE−063
	L6207		ATE1013
	F6203, F6204		ATF−119
	F6101		ATF−155
	F6202	(450KHZ)	ATF1155
	L6103	(2.2μH)	ATH1043
	L6202, L6203, L6208		LCTA2R2J3225

CAPACITORS

Mark	No.	Description	Parts No.
	C6202, C6234, C6236	(1μF/16V)	ACG1051
	C6107		CCSCH010C50
	C6229		CCSCH821J50
	C6110		CCSQCH020C50
	C6101		CCSQCH050C50
	C6108, C6203, C6268		CCSQCH101J50
	C6111, C6116, C6208, C6221, C6222		CCSQCH150J50
	C6115		CCSQCH330J50
	C6114		CCSQRH080D50
	C6113		CCSQRH180J50
	C6105		CCSQTH150J50
	C6261		CEAS010M50
	C6224, C6246, C6262		CEAS100M50
	C6216, C6217		CEAS330M16
	C6231, C6233		CEAS3R3M50
	C6219		CEAS470M10
	C6243−C6245		CEAS470M16
	C6227		CEAS470M25
	C6238		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6103, C6106, C6112, C6204		CKSQYB102K50
	C6102, C6109, C6117, C6210, C6264		CKSQYB103K50
	C6213		CKSQYB223K50
	C6230		CKSQYB333K50
	C6228, C6252		CKSQYB472K50
	C6209, C6237, C6265, C6267		CKSQYB473K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50
	C6235		CKSQYF224Z25
	C6225, C6241, C6266		CKSQYF473Z50
	C6232		CKSYB333K50
	C6251		CKSYB472K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
	VR6201 (10k)		ACP1056
	VR6202		VRTB6VS223
	R6299, R6300		RD1/8PM102J
	R6113, R6116, R6118, R6268−R6271		RS1/8S000J
	R6275, R6276, R6278, R6283, R6284		RS1/8S000J
	R6290, R6293, R6294, R6297		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211		RS1/8S103J
	R6237		RS1/8S182J
	R6209		RS1/8S221J
	R6239		RS1/8S332J
	R6101		RS1/8S470J
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Parts No.
	BN6201	TERMINAL 4−P	AKA1016
	X6203	CRYSTAL RESONATOR (7.2MHz)	ASS1042
	X6201	CRYSTAL RESONATOR (456kHz)	ASS1066
	X6202	CERAMIC RESONATOR (450kHz)	ATF1027
		AM RF TUNING BLOCK	AXX1041

AF CD ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC8151		CXA1372Q
	IC8301		CXD2507AQ
	IC1001		ICP−N70
	IC8201, IC8202		LA6520
	IC2104		M66311FP
	IC2101		MC14052BF
	IC2201, IC2202, IC3301, IC3501, IC3601		NJM4558M−D
	IC8405		NJM4558M−D
	IC2102		TC9162N
	IC8401		TC9268F
	Q1002, Q1040		2SA1515
	Q1006		2SB1425
	Q1005, Q106		2SB560
	Q1403, Q9001, Q9002		2SC2458
	Q1003		2SC3377
	Q105		2SD438
	Q8401		2SK246
	Q1001, Q1007, Q1041		RN1201
	Q1004, Q9004		RN2201
	Q8402		RN2203
	D1002		D2SBA20 (B)
	D1001		D5SB20F
	D1021, D1022, D1031−D1033		HSS104−02
	D1153, D1154, D6901, D8301, D8401		HSS104−02
	D1023		RD30ESB4
	D1151, D1152		RD5.1ESB
	D1011, D1012		RD5.6ESB2
	D2201, D8211		RD6.2ESB
	D1010		RD7.5ESB
	D1007−D1009, D1013−D1020		S5688G
	D1024, D1025, D1041−D1043		S5688G
	D1996−D1999		S5688G

CAPACITORS

Mark	No.	Description	Parts No.
	C1010, C1021 (0.01/150V)		ACG1005
	C1001, C1002 (4700/63V)		ACH1249
	C2255, C8173, C8174		CCSQCH101J50
	C8429, C8430		CCSQCH121J50
	C8403, C8404		CCSQCH150J50

Mark	No.	Description	Parts No.
	C3303, C3304		CCSQCH220J50
	C2204		CCSQCH331J50
	C8435−C8438		CCSQCH560J50
	C2702, C2703		CCSQSL391J50
	C8433, C8434		CEANP2R2M50
	C1019		CEAS010M50
	C1225		CEAS100M50
	C1016		CEAS101M10
	C1011, C1012		CEAS101M25
	C1020		CEAS101M35
	C1018		CEAS101M63
	C1007		CEAS220M50
	C1017		CEAS221M35
	C1004		CEAS222M35
	C8216, C8217, C8302		CEAS330M35
	C8175, C8176		CEAS331M16
	C1003		CEAS332M35
	C1013, C1014		CEAS470M25
	C2251, C2252		CEAS470M50
	C3301, C3302, C3501, C8160, C8162		CEAS4R7M50
	C1501, C1502		CEASR15M50
	C3502, C3601, C8309		CEASR47M50
	C2503, C2504		CEYA2R2M50
	C1040		CKCYF473Z50
	C8164, C8167, C8169, C8212		CKSQYB103K50
	C8306, C8441, C8442		CKSQYB152K50
	C3309, C3310, C8155		CKSQYB182K50
	C3503		CKSQYB223K50
	C3305, C3306		CKSQYB273K50
	C3307, C3308, C8170		CKSQYB332K50
	C8156, C8168		CKSQYB333K50
	C2201−C2203		CKSQYB471K50
	C8171, C8172		CKSQYB472K50
	C8307		CKSQYB473K50
	C8474, C8476, C8478		CKSQYB561K50
	C3311, C3312, C8157, C8202, C8203		CKSQYF103Z50
	C8205−C8207		CKSQYF103Z50
	C1305−C1308, C2253, C2257, C2258		CKSQYF104Z50
	C8158, C8159, C8161, C8163, C8301		CKSQYF104Z50
	C8304, C8308, C8361, C8414, C8415		CKSQYF104Z50
	C8431, C8432, C8461, C8462, C8473		CKSQYF104Z50
	C8477		CKSQYF104Z50

RESISTORS

Mark	No.	Description	Parts No.
	VR8151, VR8152 (22k)		ACP1057
	R2125		RA11T103J
	R1159, R1160		RD1/2PM151J
	R1064, R1153, R1157		RD1/4PM102J
	R1041		RD1/4PM222J
	R1002		RD1/4PM272J
	R1003		RD1/4PM472J
	R1305, R1306		RD1/4PMF6R8J
	R1031, R2101, R2102, R2105−R2107		RD1/8PM102J
	R2111−R2113, R2129, R9007, R9008		RD1/8PM102J
	R1011, R1040, R1063, R1154, R1158		RD1/8PM103J
	R8368		RD1/8PM105J
	R1032		RD1/8PM152J
	R1012, R1039		RD1/8PM203J
	R1009		RD1/8PM303J
	R1051		RD1/8PM331J
	R3502		RD1/8PM433J
	R1052		RD1/8PM471J
	R1151, R2136, R9005, R9006		RD1/8PM472J

Mark	No.	Description	Parts No.
	R2114		RD1/8PM473J
	R1013		RD1/8PM562J
	R2121, R2122		RD1/8PM912J
	R1998		RS1LMF220J
	R1224		RS1LMF472J
	R1007, R1017		RS2LMFR22J
	R1999		RS3LMF3R9J
	Other Resistors		RS1/10S□□□J

OTHERS

	CN8131	CONNECTOR	12FMZ−ABT
	CN8203	CONNECTOR 4P	4−173981−4
	CN8204	6P JUMPER CONNECTOR	52147−0610
	CN2101	PIN JACK (2P)	AKB1171
		SPEAKER TERMINAL 4−P	AKE1026
	CN1	36P SOCKET	AKP1105
	CN10	CONNECTOR (5P)	KPC5
	CN4	CONNECTOR (13P)	KPE13
	X8401	XTAL RES (OSC) (16.9344MHz)	PSS1008
		PCB BINDER	VEF1008
	CN8202	CONNECTER	VKN1051
	KN8001	EARTH METAL FITTING	VNF1084

VR ASSY

SEMICONDUCTORS

	IC1501		NJM4558M−D
	IC1551		TA8409S

CAPACITORS

	C1505, C1506		CCSQSL220J50
	C1554		CEAS101M25
	C1503, C1504		CEYA2R2M50
	C1557, C1558		CKSQYB333K50
	C1509, C1510		CKSQYB473K50
	C1551−C1553, C1555, C1556		CKSQYF104Z50
	C1511		CKPUYF104Z50

RESISTORS

	VR301	(100K−B3×2)	ACX7004
	R1559, R1560		RD1/8PM391J
	Other Resistors		RS1/10S□□□J

HEADPHONE ASSY

CAPACITORS

	C1255		CKSQYF473Z50

RESISTORS

	R1201, R1202		RS3LMF331J

OTHERS

	CN1201	JACK	AKN1028

S.TRANS ASSY

SEMICONDUCTORS

	IC1002−IC1005		ICP−N70

DISPLAY ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1951		M66311FP
	IC3701−IC3703		NJM4558M−D
	IC1901		PD4583A
	Q1901		2SC2458
	Q1902		RN1201
	Q1707		RN2201
	D1801−D1815, D1901, D1903		HSS104−02
	D1905, D1906, D3701−D3705		HSS104−02
	D1951, D1953		HZS6CL
	D1904		HZS7AL
	D1705		BR3371XJ30A

COILS AND FILTERS

	L1901		LAU220J

SWITCHES AND RELAYS

	S1801−S1815		ASG1051

CAPACITORS

	C1903	(0.047/5.6V)	ACH1246
	C1952		CCSQCH101J50
	C1907		CEAS010M50
	C1910		CEAS100M50
	C1905		CEJA221M6
	C1902		CEJA470M16
	C1908		CFTYA224J50
	C1915, C1916		CKSQYB102K50
	C1954		CKSQYB103K50
	C3710, C3711		CKSQYB152K50
	C3704, C3705		CKSQYB153K50
	C1970, C3713, C3714		CKSQYB471K50
	C3707, C3708		CKSQYB472K50
	C3701, C3702		CKSQYB473K50
	C1909		CKSQYF102Z50
	C1955		CKSQYF103Z50
	C1901, C1904, C1906, C1911, C1912		CKSQYF473Z50
	C3703, C3706, C3709, C3712, C3715		CKSQYF473Z50

RESISTORS

	R1955, R1956		RA15T473J
	R1803, R1804		RD1/8PM223J
	Other Resistors		RS1/10S□□□J

OTHERS

	V1701	FL TUBE	AAV7002
	CN1001	36P SOCKET	AKP1109
	X1901	CERAMIC RESONATOR (4.19MHz)	ASS1018
	X1902	REMOTE RECEIVER UNIT	GP1U27X

PRIMARY ASSY

COILS AND FILTERS

	L1101		ATF1136

CAPACITORS

	C1101	(0.01/400V)	ACG1002

RESISTORS

	R1101	(2.2M, 1/2W)	ACN−208

SW ASSY

SEMICONDUCTORS

	Q1701−Q1706		2SA1048
	D1708		BR3371XJ30A
	D1706, D1707, D1709−D1714		MPG3362X195A

SWITCHES AND RELAYS

	S1816−S1835		ASG1051

RESISTORS

Mark	No.	Description	Parts No.
	R1703		RD1/8PM201J
	R1704		RD1/8PM241J
	Other Resistors		RS1/10S□□□J

MIC ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC2501		NJM4558M−D

CAPACITORS

Mark	No.	Description	Parts No.
	C2504		CCSQSL221J50
	C2503, C2505		CEAS100M50
	C2501		CKSQYB122K50
	C2507		CKSQYB473K50
	C2506		CKSQYB682K50
	C2508, C2509		CKSQYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
	VR2501	(10K−B)	ACS1028
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Parts No.
	CN2501	JACK	AKN−207

FRONT 100W ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC7501		UPC4570G2 (5)
	Q7507, Q7508		2SA1182
	Q7601		2SA1255
	Q7501, Q7502		2SC2240
	Q7505, Q7506		2SC2859
	Q7602, Q7603		2SC3138
	D7505, D7506, D7517, D7518		1SS181
	D7503, D7504, D7516		1SS184
	D7535−D7538		1SS226
	D7521−D7524		1SS244
	D7519, D7520, D7525, D7526, D7531		HSS104−02
	D7533		HSS104−02
	D7507−D7510		RD3.3ESB2

CAPACITORS

Mark	No.	Description	Parts No.
	C7523, C7524		CEALR10M50
	C7519−C7522, C7545−C7552		CCSQCH101J50
	C7525−C7528		CCSQCH271J50
	C7503, C7504		CCSQCH331J50
	C7541, C7542		CCSQCH470J50
	C7509, C7510		CEAS101M10
	C7602		CEJA221M6R3
	C7540		CEJA3R3M50
	C7539		CEJA4R7M50
	C7529−C7532		CKSQYB333K50
	C7699		CKSQYB104K25
	C7543, C7544		CKSQYB472K50
	C7601, C7603		CKSQYF104Z50
	C7537		CKSQYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
	R7519, R7520	(634)	ACN1106
	R7515, R7516	(1.8k)	ACN1107
⚠	R7541, R7542		RD1/4PMF100J
⚠	R7547−R7550		RS1/10S2200F
	R7753		RS1/8S000J
⚠	R7537−R7540		RS1/8S100J
	R7553		RS1/8S101J
⚠	R7543, R7544		RS1/8S7R5J
	Other Resistors		RS1/10S□□□J

REGULATOR ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC7201		PAC006C
	Q7301, Q7302		2SC1815
	Q7202		2SC2712
	D7204		1SS184
	D7205, D7208		HSS104−02
	D7210		RB441Q−40
	D7207		RD5.6ESB2
	D7206, D7211		RD4.7ESB

CAPACITORS

Mark	No.	Description	Parts No.
	C7402, C7406, C7408	(0.082μF/25V)	ACG1050
	C7204	(1μF/16V)	ACG1051
	C7401, C7405, C7407	(0.33μF/50V)	ACG1053
	C7409	(10μF/35V)	ACH1150
	C7140		CEAS010M50
	C7205		CEJA101M10
	C7202		CEANL4R7M50
	C7203		CEJAR33M50
	C7201, C7208, C7219		CKSQYB103K50
	C7301		CKSQYB332K50
	C7206, C7215, C7216, C7404		CKSQYF104Z50

RESISTORS

Mark	No.	Description	Parts No.
	VR7201	(22K)	RCP1103
⚠	R7403−R7405	(1Ω)	ACN1104
	R7252		RD1/6PM102J
	R7253		RD1/6PM103J
	R7303		RS1/10S1002F
	R7304		RS1/10S8200F
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Parts No.
	CN7101	12P JUMPER CONNECTOR	KPE12

DECK UNIT

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC4421		CXA1100P
	IC4901		M66320FP
	IC4202		MC14066BF
	IC4101, IC4151, IC4301		NJM4558M−D
	Q4111, Q4113, Q4161, Q4352		2SA1515
	Q4356		2SC2240
	Q4101, Q4102, Q4151, Q4152, Q4203−Q4206, Q4301, Q4302, Q4305, Q4306, Q4451−Q4454		2SC2458
	Q4355		2SC2712
	Q4353, Q4354		2SC3377
	Q4307, Q4308		2SK373
	Q4303, Q4901		XDA124ES
	Q4208		XDA143ES
	Q4112, Q4114, Q4155, Q4162, Q4357		XDC124ES
	Q4207, Q4351		XDC143ES
	D4111, D4161, D4201, D4202, D4301−D4306, D4451−D4453, D4901−D4906		HSS104−02

COILS AND FILTERS

Mark	No.	Description	Parts No.
	F4401, F4402		ATF1064
	T4351		ATX−043
	L4301, L4302		LTA392J
	L4303, L4304		LTA822J

CAPACITORS

Mark	No.	Description	Parts No.
	C4361 (2000P/630V)		ACE1020
	C4319, C4320		CCDSL271K500
	C4323, C4324		CCSQCH100D50
	C4902		CCSQCH101J50
	C4353		CCSQCH221J50
	C4109, C4110, C4159, C4160		CCSQCH471J50
	C4151, C4152		CCSQCH561J50
	C4101, C4102, C4321, C4322, C4355		CCSQCH681J50
	C4303, C4304, C4451, C4452		CEAS010M50
	C4359, C4360, C4364, C4403–C4405, C4407, C4454		CEAS100M50
	C4401, C4408		CEAS101M25
	C4365, C4366, C4453		CEAS220M50
	C4301, C4302, C4315, C4316		CEAS2R2M50
	C4103, C4104, C4153, C4154, C4309, C4310, C4317, C4318		CEAS330M25
	C4357		CEAS3R3M50
	C4107, C4108, C4157, C4158		CEAS470M25
	C4351		CEAS470M25
	C4207, C4208		CEAS4R7M50
	C4402, C4406		CEASR22M50
	C4363		CKCYB222K500
	C4352, C4354, C4903, C4904		CKSQYB103K50
	C4313, C4314		CKSQYB152K50
	C4307, C4308		CKSQYB273K50
	C4305, C4306		CKSQYB333K50
	C4901		CKSQYF473Z50
	C4358		CQMA123K250
	C4356		CQMA153J50
	C4362		CQMA562K400
	C4105, C4106		CQMA682J50
	C4155, C4156		CQMA682J50
	C4311, C4312		CQMA823J50

RESISTORS

Mark	No.	Description	Parts No.
	VR4111		VRTP6HS682
	VR4201–VR4204		VRTP6HS203
	VR4351, VR4352		VRTP6HS204
	VR4301, VR4302		VRTP6HS502
	R4353		RD1/2PM680J
	R4121		RD1/8PM163J
	R4401, R4402		RD1/8PM242J
	R4361, R4362		RD1/8PM333J
	R4357		RD1/8PM6R8J
	R4113, R4114, R4163, R4164, R4323, R4324		RD1/8PM820J
	R4452		RD1/8PM103J
	Other Resistors		RS1/10S□□□J

OTHERS

Mark	No.	Description	Parts No.
	CN24	3P SOCKET	EKS1018
	CN25	5P SOCKET	EKS1019
	CN16	12P JUMPER CONNECTOR	KPE12
	CN3002	15P JUMPER CONNECTOR	KPE15

LOADING BOARD ASSY

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
	S601, S602		DSG1016

OTHERS

Mark	No.	Description	Parts No.
	CN601	CONNECTOR 4P	4–173979–4

MOTOR BOARD ASSY

OTHERS

Mark	No.	Description	Parts No.
	CN602	6PJUMPER CONNECTOR	52151–0610

SELECT BOARD ASSY

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
	S604–S606		DSG1016
	S603		PSG1010

MECHANISM BOARD ASSY

SWITCHES

Mark	No.	Description	Parts No.
	S610		DSG1016

OTHERS

Mark	No.	Description	Parts No.
	CN610	MT CONNECTOR 4P	173979–4

6. ADJUSTMENTS

6.1 TUNER SECTION

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1−1.

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98 Non modulation	80 or more	—	L6207	Adjust so that the DC voltage between Pin 4 and Pin 28 of IC6201 becomes 0V±50mV.
2	Front End Sensitivity	98	10−30	98MHz	L6102 T6101	Adjust so that the DC voltage of the Pin12 of IC6201 (S-meter) becomes at maximum level.
3	TUNED IND. Lighting Level	98	15±2	98MHz	VR6201	Adjust so that the indicators of TUNED IND. start to light up.

Notes:

- *Before adjusting, make sure there is no gap between L6101 and L6102. If there is a gap between them, bring them into contact with each other first, and then make adjustments.*
- *Make indicator adjustments in order of AM → FM.*

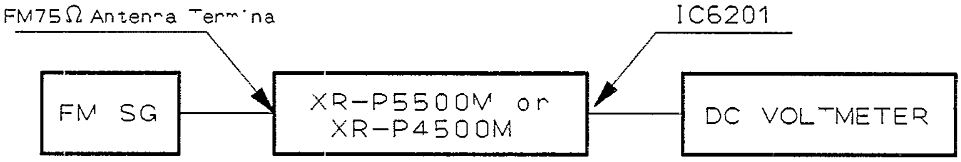


Fig. 1−1 FM Adjustment Connection Diagram

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1−2.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47±2	999kHz	VR6202	Adjust so that the indicators of TUNED IND. start to light up.

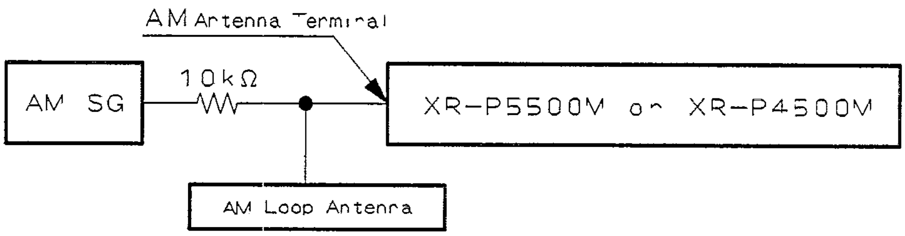


Fig. 1−2 AM Adjustment Connection Diagram

FM/AM TUNER MODULE

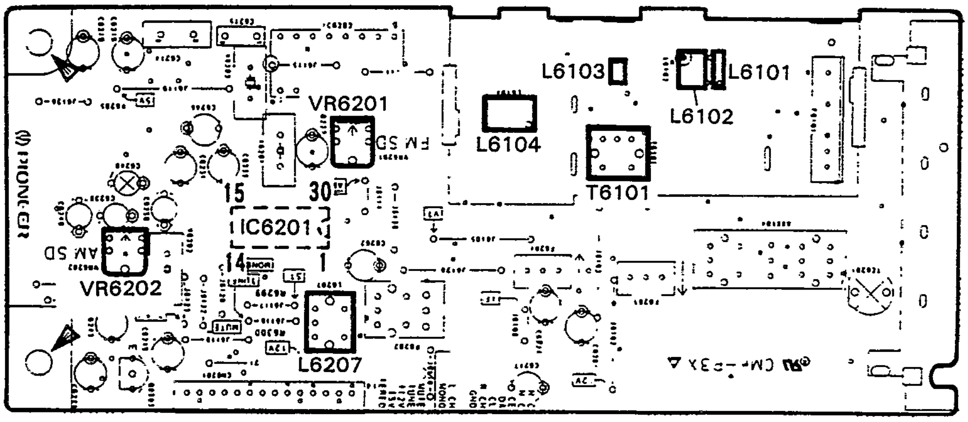


Fig. 1−3 Adjustment Points

6.2 POWER AMP MODULE SECTION (Refer to Fig. 2−1.)

1. Handling Precautions

- Since the heat sink and transistor metallic parts are connected to the Front Amp output, make sure they do not contact the GND (chassis) or other circuits.
- Since there is residual high voltage in the Power Amp Module ±B1 (FRONT 100W ASSY) and ±B2 (REGULATOR ASSY) even when the power is OFF, caution should be exercised. (If necessary, the voltage should be discharged).
- When handling the Power Amp Module, make sure you do not touch the fan motor blade.

2. Adjustment and Confirmation of Idle Current

- Basically, the idle current needs to be confirmed when replacing a power transistor, driver transistor, or bias transistor, or when the entire split board Assy of the Power Amp Module has been replaced.
- Make sure the heat sink has cooled sufficiently before measuring the idle current. (Temperature should be the same as room temperature; 25°C is ideal, if possible.)
- Idle current stipulated value: 3−50mA.

■ **Front Amp Side (FRONT 100W ASSY)**

Step	Measurement	Item	Remarks
1	Lch side	Insert a resistor (0.22Ω, 3W or more) in series in the connector CN7502 +B1 (or −B1) line (terminal No. 5 or 6). (Refer to Fig. 2−2.)	For measuring voltage at both sides of resistor
2		Short both sides of C7524.	Do not operate Rch side.
3		Turn the power ON, wait 6 seconds, and then measure the resistance voltage in Step 1.	Lch Idle current I=V/0.22 (Ω)
4	Rch side	● Same as Step 1 above. ● Short both sides of C7523.	Do not operate Lch side.
5		Turn the power ON under the above conditions, and after 6 seconds measure the resistance voltage in Step 1.	
6	——	If the measured idle current is greater than 50mA, perform the following procedure.	
7	Lch side	Short between the Point A pattern in Fig. 2−3 using solder.	Connect R7517 to R7515 in a parallel circuit.
8	Rch side	Short between the Point B pattern in Fig. 2−3 using solder.	Connect R7518 to R7516 in a parallel circuit.
9	——	After performing Steps 7 and 8, remeasure the idle current and confirm that it is below 50mA.	

Step	Measurement	Item	Remarks
10	——	If the measured idle current is below 3mA, perform the following procedure.	
11	Lch side	Short between the Point C pattern in Fig. 2−3 using solder.	Connect R7551 to R7519 in a parallel circuit.
12	Rch side	Short between the Point D pattern in Fig. 2−3 using solder.	Connect R7552 to R7520 in a parallel circuit.
13	——	After performing Steps 11 and 12, remeasure the idle current and confirm that it is greater than 3mA. (Within 3−50mA)	

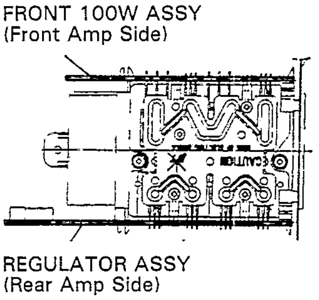

FRONT 100W ASSY
(Front Amp Side)
REGULATOR ASSY
(Rear Amp Side)

Fig. 2−1 Power Amp Module (POWER MOD. F100)

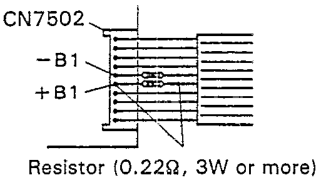

CN7502
−B1
+B1
Resistor (0.22Ω, 3W or more)

Fig. 2−2 FRONT 100W ASSY

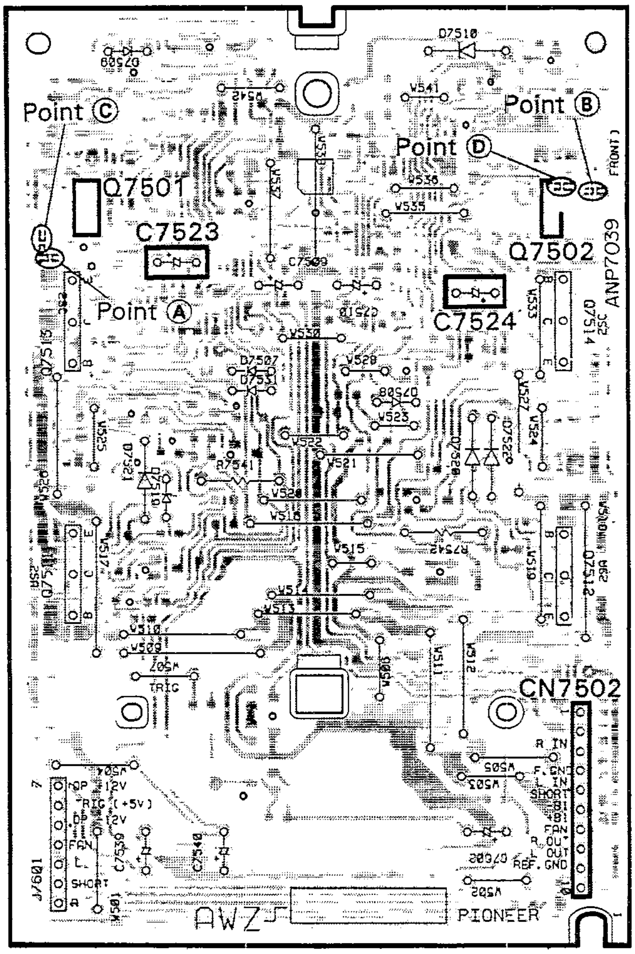

Point Ⓒ
Point Ⓑ
Point Ⓓ
Point Ⓐ
Q7501
C7523
Q7502
C7524
CN7502
ANP7039
FRONT
D7510
R IN
F.GND
L IN
SHORT
−B1
+B1
FAN
R OUT
L OUT
REF. GND
TRIG
12V
TRIG (+5V)
FAN
SHORT
J7601
AWZ
PIONEER

Fig. 2−3 FRONT 100W ASSY

3. Adjusting the Operating Temperature Setting of the Fan Motor (VR7201)

This adjustment is necessary when IC7401 (+12V regulator), Q7301 and Q7302 (temperature sensors), IC7201 (protection IC), or VR7201 has been replaced, or when the entire split board Assy of the Power Amp Module has been replaced.

■ Adjustment-Related Cautions

- Make sure the heat sink has sufficiently cooled (is the same as room temperature Ta.)
- Once the power has been turned ON, make measurements and adjustments as quickly as possible. (If too much time is taken, the heat sink temperature will rise, and the measurements will deviate from the Ta measurement point.)

■ Adjustment

1. Connect a voltmeter between TEMP and VL (or between IC7201 terminals No.9 and 7). (Refer to Fig. 2−4.)
2. Determine the fan motor operating temperature setting by means of the following formula. (Tolerance is within ±30mV.)
   Formula: (75°C − Ta) × 19 (mV)
   Ta: ambient temperature (°C)
3. Adjust VR7201 so that the voltage between TEMP and VL is the value obtained from the above formula.

For example:
when the room temperature is 25°C,
set value = (75 − 25) × 19 (mV)
= 950mV (tolerance within ±30mV).

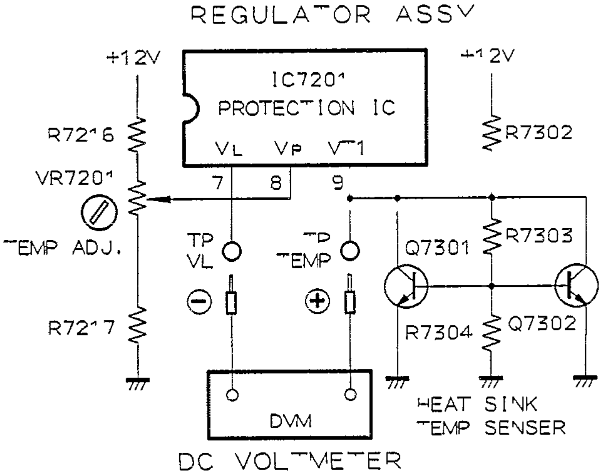

REGULATOR ASSY
+12V
+12V
IC7201
PROTECTION IC
VL
VP
VT1
7
8
9
R7216
VR7201
TEMP ADJ.
R7217
TP
VL
TP
TEMP
⊖
⊕
DVM
DC VOLTMETER
R7302
R7303
Q7301
Q7302
R7304
HEAT SINK
TEMP SENSER

Fig. 2−4 Adjustment of Operating Temperature Setting of Fan Motor

6.3 CASSETTE DECK SECTION

- Adjustment points and test points are shown in Fig. 3−2 and Fig. 3−4.

Mechanical Adjustment

- Set the TAPE function.
- Test tape: STD−301 (3kHz, 30min).

1. Tape Speed Adjustment

No.	Mode	Test Tape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	PLAY	STD−301 (Playback: 3kHz)	DECK Unit VR4111	TAPE TEST POINT (Rch) (AF CD Assy)	Press the PLAY SW and adjust so that the reading becomes 3010Hz±10Hz. Confirm that wow & flutter level is below 0.2% (in the reverse direction, confirm that the reading is within 3010Hz±60Hz).	

Electrical Adjustment

Check the following before starting.

1. Confirm that the tape speed adjustment has been completed.
2. Clean the heads and demagnetize them using a head eraser.
3. Set the measurement level to 0 dBV = 1 Vrms.
4. Use the specified tape for adjustment. Use the labeled (A) side of the test tape.
   STD−331E: For playback adjustment
   STD−631: Normal blank tape
5. Provide yourself with the following measuring devides:
   - AC millivoltmeter
   - Low-frequency oscillator
   - Attenuator
   - Oscilloscope
6. Adjust both right and left channels unless otherwise specified.
7. Turn the DOLBY NR switch off unless otherwize specified.
8. Warm up the unit for several minutes before adjustment. In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
9. Always follow the indicated adjustment order. Otherwise, a complete adjustment may not be achieved.

Playback Adjustment (Decks I and II)

1. Head Azimuth Adjustment
2. Playback Level Adjustment

Recording Adjustment (Deck II)

1. Bias Oscillation Frequency Adjustment
2. Recording Bias Adjustment
3. Recording Level Adjustment.
4. ALC Operation Check

**As the reference recording level is 250nwb/m for STD−331E, the recording level will be higher by 4 dB for STD−331B (160nwb/m). When adjusting, pay carefull attention to the type of tape used.*

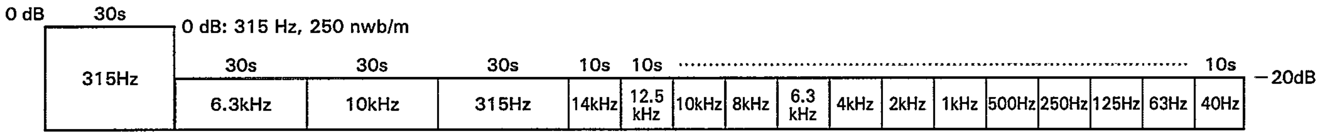


Fig. 3−1 STD−331E Test Tape

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ▯▯ are trademarks of Dolby Laboratories Licensing Corporation.

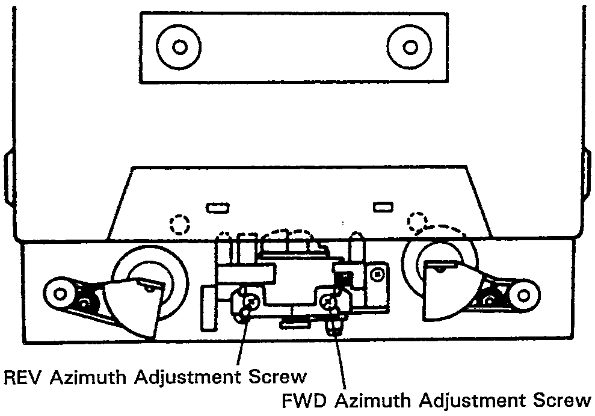


Fig. 3−2 Head Azimuth Adjustment

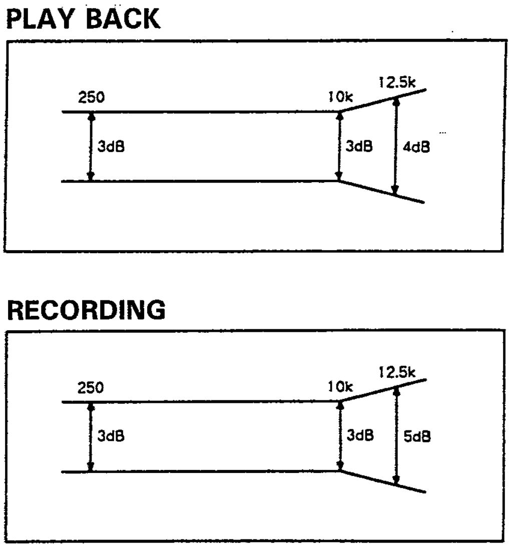


Fig. 3−3 Frequency Characteristics

● Playback Adjustment

1. Head Azimuth Adjustment

- This unit is equipped with auto tape selector.
- Do not switch between forward and reverse operation with the screwdriver inserted.

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD−331E test tape (Playback: 10kHz, −20dB)	Deck I	Head azimuth adjustment screw (Fig. 3−2)	TAPE TEST POINT (L, Rch) (AF CD Assy)	Max. playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.
				Deck II				

2. Playback Level Adjustment

- Since this adjustment determines playback Dolby NR level, perform it carefully.

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD−331E test tape (Playback: 315Hz, 0dB)	Deck I	VR4201 (Lch) VR4202 (Rch)	TAPE TEST POINT (L, Rch) (AF CD Assy)	−1.2 dBV	
				Deck II	VR4203 (Lch) VR4204 (Rch)			

● Recording Adjustment

1. Bias Oscillation Frequency Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Load the STD−631 test tape and set the recording mode.	Deck I	—	—	Oscillation frequency to be 105.0kHz ±2kHz.	When the power is turned ON while the BAND button is depressed, the frequency will decrease 2−3 kHz.
				Deck II	T4351	Between Ⓐ point in Fig. 3−4 and GND.		

2. Recording Bias Adjustment

- Since this adjustment affects recording bias, prevent distortion from increasing due to underbias.

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the VIDEO/AUX IN terminal and set the input selector to VIDEO.	Deck I	—	TAPE TEST POINT (L, Rch) (AF CD Assy)	−25.2 dBV	
				Deck II	Input signal level			
2	NORMAL	REC/ PLAY	Load the STD−631 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	Deck I	—	TAPE TEST POINT (L, Rch) (AF CD Assy)		Repeat adjustment until playback level of the 10kHz signal is within 0±0.5dB from that of the 315Hz signal.
				Deck II	VR4351 (Lch) VR4352 (Rch)			

Note: Set to the same level used for the 315Hz input signal at step 1.

3. Recording Level Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the VIDEO/AUX IN terminal and set the input selector to VIDEO.	Deck I	Input signal level	TAPE TEST POINT (L, Rch) (AF CD Assy)	−5.2 dBV	
				Deck II				
2	NORMAL	REC/ PLAY	STD−631 test tape and record/playback the 315Hz signal.	Deck I	—	TAPE TEST POINT (L, Rch) (AF CD Assy)		Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes −5.2dBV.
				Deck II	VR4301 (Lch) VR4302 (Rch)			

4. ALC Operation Check

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC • PAUSE	Input a 315Hz signal to the VIDEO/AUX IN terminal and set the input selector to VIDEO.	Input signal level	TAPE TEST POINT (L, Rch) (AF CD Assy)	−5.2 dBV	
2				Set to a level +10dB above the input level at step 1.		−2.2±2.5dBV	

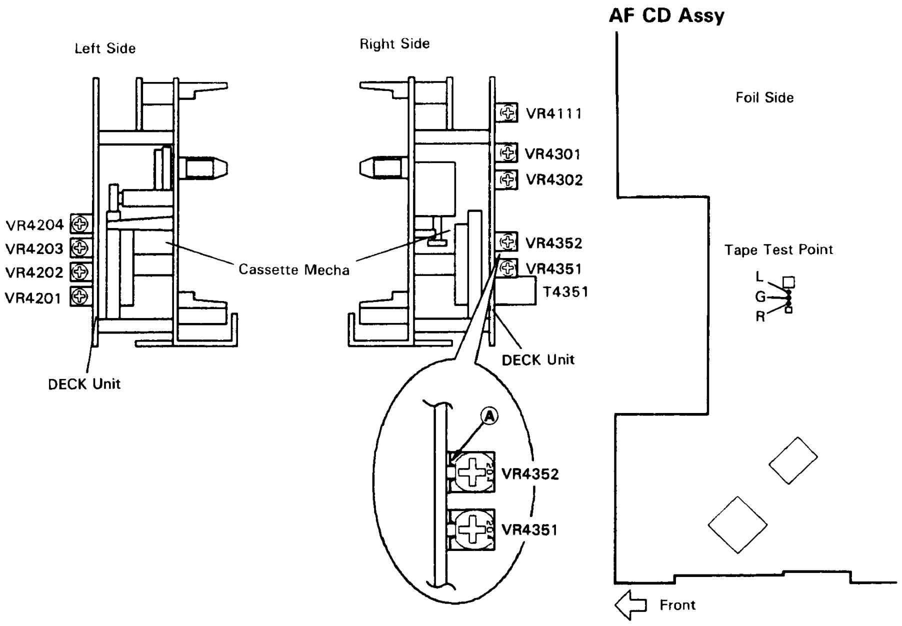


Fig. 3−4 Adjusting Points and Measurement Points

6.4 CD SECTION

■ Adjustment Methods

If a disc player is adjusted incorrectly or inadequately, it may malfunction or not work at all even though there is nothing at all wrong with the pickup or the circuitry. Adjust correctly following the adjustment procedure.

● Adjustment Items/Verification Items and Order

If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in steps 1 – 4, the pickup block may be defective.

Step	Item	Test Point	Adjustment Location
1	Focus offset verification	TP1, Pin6 (FOER)	None
2	Tracking error balance verification	TP1, Pin2 (TRER)	None
3	Pickup radial/tangential direction tilt adjustment	TP1, Pin1 (RF)	Radial tilt adjustment screw, Tangential tilt adjustment screw
4	RF level verification	TP1, Pin1 (RF)	None
5	Focus servo loop gain adjustment	TP1, Pin5 (FOIN) TP1, Pin6 (FOER)	VR8152 (FCS GAN)
6	Tracking servo loop gain adjustment	TP1, Pin3 (TRIN) TP1, Pin2 (TRER)	VR8151 (TRK GAN)

● Abbreviation Table

FOER : Focus Error
TRER : Tracking Error
FCS GAN : Focus Gain
TRK GAN : Tracking Gain
FOIN : Focus In
TRIN : Tracking In

● Measuring Instruments and Tools

1. Dual trace oscilloscope (10 : 1 probe)
2. Low-frequency oscillator
3. Test disc (YEDS – 7)
4. Low pass filter (39kΩ + 0.001μF)
5. Resistor (100kΩ)
6. Standard tools

● Test Point and Adjustment Variable Resistor Positions

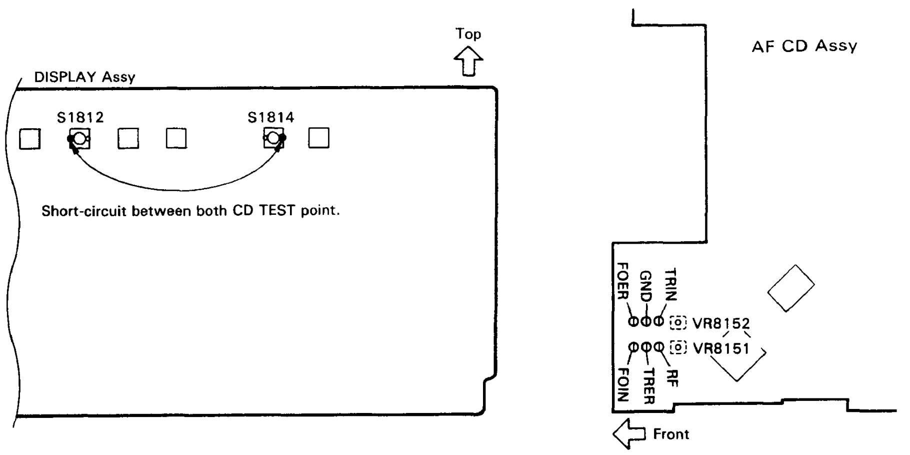


Fig. 1 Adjustment Location

● Notes

1. Use a 10 : 1 probe for the oscilloscope.
2. All the knob positions (settings) for the oscilloscope in the adjustment procedures are for when a 10 : 1 probe is used.

● Test Mode

These models have a test mode so that the adjustment and checks required for service can be carried out easily. When these models are in test mode, the keys on the front panel work differently from normal. Adjustments and checks can be carried out by operating these keys with the correct procedure. For these models, all adjustments are carried out in test mode.

[Setting these models to test mode]
How to set this model into test mode.
1. When the Power switch to activated, set the FUNCTION button to CD.
2. Short-circuit between both CD TEST points. (See Fig. 1)

When the test mode is set correctly, the display is different from what it usually is when the power is turned on.
If the display is still the same as usual, test mode has not been set correctly, so repeat Steps 1 – 2.

[Release from test mode]

Here is the procedure for releasing the test mode:

1. Press the STOP key and stop all operations.
2. Turn off the power switch on the front panel.

[Operations of the keys in test mode]

Code	Key Name	Function in Test Mode	Explanation
	DOLBY NR	Focus servo close	The laser diode is lit up and the focus actuator is lifted up, then lowered slowly and the focus servo is closed at the point where the objective lens is focused on the disc. With the player in this state, if you lightly rotate the stopped disc by hand, you can hear the sound the focus servo. If you can hear this sound, the focus servo is operating correctly. If you press this key with no disc mounted, the laser diode lights up, the focus actuator is pulled up, then the actuator is lowered and raised three times and returned to its original position.
▷/⏸	PLAY/PAUSE	Spindle servo ON	Starts the spindle motor in the clockwise direction and when the disc rotation reaches the prescribed speed (about 500rpm at the inner periphery), sets the spindle servo in a closed loop. Be careful. Pressing this key when there is no disc mounted makes the spindle motor run at the maximum speed. If the focus servo does not go correctly into a closed loop or the laser light shines on the mirror section at the outermost periphery of the disc, the same symptom is occurred.
		Tracking servo close/open	Pressing this key when the focus servo and spindle servo are operating correctly in closed loops puts the tracking servo into a closed loop, displays the track number being played back and the elapsed time on the front panel, and outputs the playback signal. If the elapsed time is not displayed or not counted correctly or the audio is not played back correctly, it may be that the laser is shining on the section with no sound recorded at the outer edge of the disc, that something is out of adjustment, or that there is some other problem. This key is a toggle key and open/close the tracking servo alternately. This key has no effect if no disc is mounted.

Code	Key Name	Function in Test Mode	Explanation
|◁◁ • ◁◁	MANUAL/ TRACK SEARCH REV	Carriage reverse (inwards)	Moves the pickup position toward the inner diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
▷▷| • ▷▷	MANUAL/ TRACK SEARCH FWD	Carriage forward (outwards)	Moves the pickup position toward the outer diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
□	STOP	Stop	Initializes and the disc rotation stops. The pickup and disc remain where they are when this key is pressed.
⏏	EJECT	CD magazine eject	Stores Disc 1 in the CD magazine, then ejects the CD magazine. However, even though the CD magazine is ejected, the pickup does not return to the park position. Even if the CD magazine is mounted again, the pickup remains where it is.

Note: When inserting the magazine, disc 1 of the magazine is loaded automatically.

[How to playback a disc in test mode]

In test mode, since the servos operate independently, playing back a disc requires that you operate the keys in the correct order to close the servos.
Here is the key operation sequence for playing back a disc in test mode.

DOLBY NR	Lights up the laser diode and closes the focus servo.
⇩	
▷/▯▯	Starts the spindle motor and closes the spindle servo.
⇩	
▷/▯▯	Closes the tracking servo.

Wait at least 2–3 seconds between each of these operations.

1. Focus Offset Verification

● Objective	Verify the DC offset for the focus error amp.		
● Symptom when out of adjustment	The model does not focus in and the RF signal is dirty.		
● Measurement Instrument Connections	Connect the oscilloscope to TP1, Pin6 (FOER) [Settings] 5mV/division 10ms/division DC mode	● Player State ● Adjustment Location ● Disc	Test mode, stopped (just the Power switch on) None None needed

[Procedure]

Verify the DC voltage at TP1, Pin6 (FOER) is 0±50mV.

Note: If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in adjustment items 1–4, the pickup block may be defective.

2. Tracking Error Balance Verification

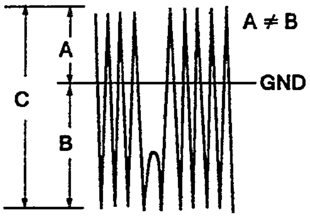
● Objective	To verify that there is no variation in the sensitivity of the tracking photo diode.		
● Symptom when out of adjustment	Play does not start or track search is impossible.		
● Measurement Instrument Connections	Connect the oscilloscope to TP1, Pin2 (TRER). This connection may be via a low pass filter. [Settings] 50mV/division 5ms/division DC mode	● Player State ● Adjustment Location ● Disc	Test mode, focus and spindle servos closed and tracking servo open. None YEDS−7

[Procedure]

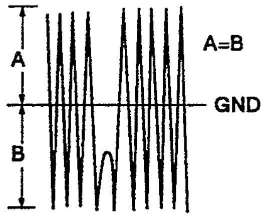
1. Move the pickup to midway across the disc (R=35mm) with the MANUAL/TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key.
2. Press the DOLBY NR key, then the PLAY/PAUSE ▷/▯▯ key in that order to close the focus servo then the spindle servo.
3. Line up the bright line (ground) at the center of the oscilloscope screen and put the oscilloscope into DC mode.
4. Supposing that the positive amplitude of the tracking error signal at TP1, pin2 (TRER) is (A) and the negative amplitude is (B), the following expression is satisfied.

When $A \geqq B$, $\frac{A-B}{C} \times \frac{1}{2} \leqq 0.1$

When $A < B$, $\frac{B-A}{C} \times \frac{1}{2} \leqq 0.1$



When there is a DC component



When there is no DC component

3. Pickup Radial／Tangential Tilt Adjustment

● Objective	To adjust the angle of the pickup relative to the disc so that the laser beams are shone straight down into the disc for the best read out of the RF signals.		
● Symptom when out of adjustment	Sound broken; some discs can be played but not others.		
● Measurement Instrument Connections	Connect the oscilloscope to TP1, Pin1 (RF). [Settings] 20mV／division 200ns／division AC mode	● Player State ● Adjustment Location ● Disc	Test mode, play Pickup radial tilt adjustment screw and tangential tilt adjustment screw YEDS－7

[Procedure]

1. Press the MANUAL／TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key to move the pickup to halfway across the disc (R=35mm).
   Press the DOLBY NR key, the PLAY／PAUSE ▷／▯▯ key twice in that order to close the respective servos and put the player into play mode.
2. First, adjust the radial tilt adjustment screw with a Phillips screwdriver so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly.
3. Next, adjust the tangential tilt adjustment screw with a Phillips screwdriver so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly (Fig. 3).
4. Adjust the radial tilt adjustment screw and the tangential tilt adjustment screw again so that the eye pattern can be seen the most clearly. As necessary, adjust the two screws alternately so that the eye pattern can be seen the most clearly.
5. When the adjustment is completed, lock the radial and tangential adjustment screw.

Note: Radial and tangential mean the directions relative to the disc shown in Fig. 2.

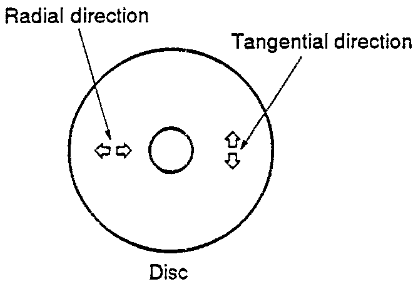
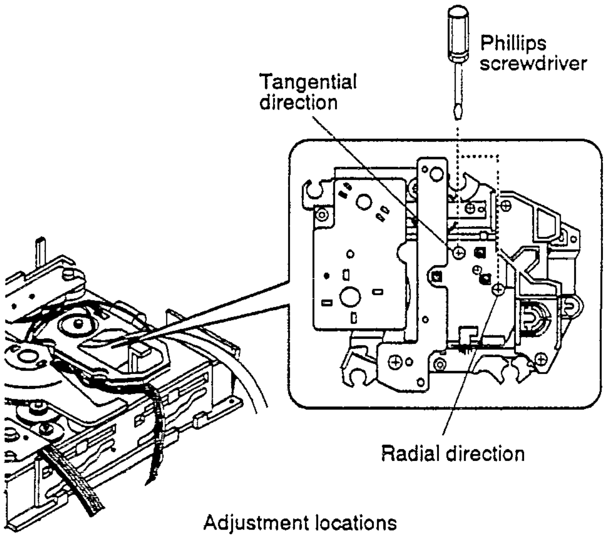


Fig. 2



Adjustment locations

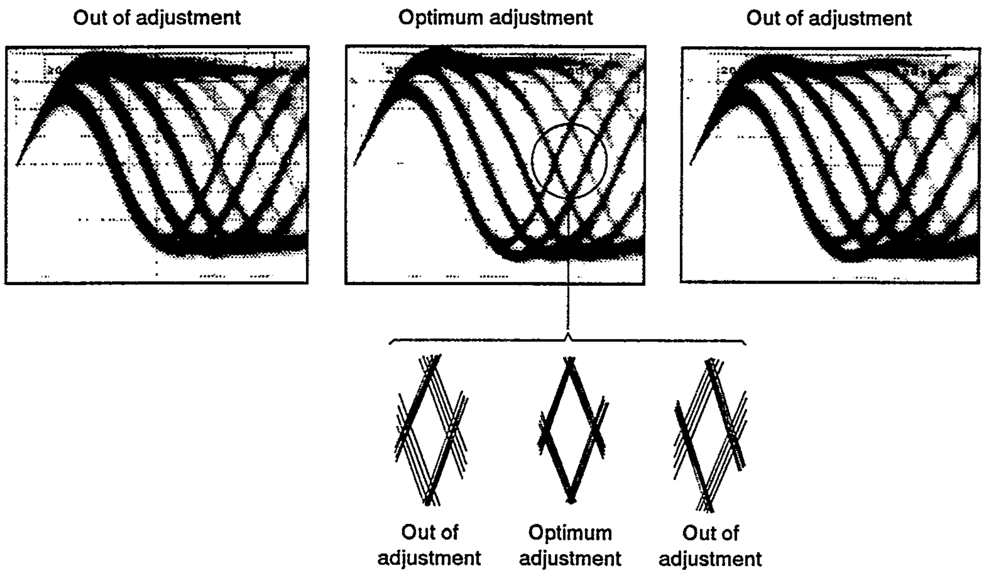

Out of adjustment
Optimum adjustment
Out of adjustment
Out of adjustment
Optimum adjustment
Out of adjustment

Fig. 3 Eye Pattern

4. RF Level Verification

● Objective ● Symptom when out of adjustment	To verify the playback RF signal amplitude. No play or no search		
● Measurement Instrument Connections	Connect the oscilloscope to TP1, Pin1 (RF). [Settings] 50mV/division 10ms/division AC mode	● Player State ● Adjustment Location ● Disc	Test mode, play None YEDS−7

[Procedure]

1. Move the pickup to midway across the disc (R=35mm) with the MANUAL/TRACK SEARCH FWD ▷▷ • ▷▷| key or REV |◁◁ • ◁◁ key, then press the DOLBY NR key, the PLAY/PAUSE ▷/|| key twice in that order to close the respective servos and put the player into play mode.
2. Verify the RF signal amplitude is 1.2Vp−p±0.2V.

5. Focus Servo Loop Gain Adjustment

● Objective ● Symptom when out of adjustment	To optimize the focus servo loop gain. Playback does not start or focus actuator noisy.		
● Measurement Instrument Connections	See Fig. 4. [Settings] CH1 20mV／division X－Y mode CH2 5mV／division	● Player State ● Adjustment Location ● Disc	Test mode, play VR8152 (FCS GAN) YEDS－7

[Procedure]

1. Set the AF generator output to 1.2kHz and 1Vp－p.
2. Press the MANUAL TRACK SEARCH FWD >▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key to move the pickup to halfway across the disc (R＝35mm), then press the DOLBY NR key, the PLAY／PAUSE ▷／▯▯ key twice in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR8152 (FCS GAN) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

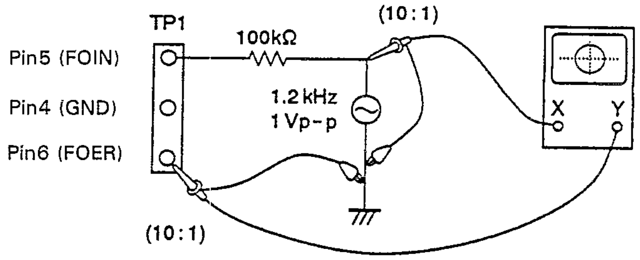
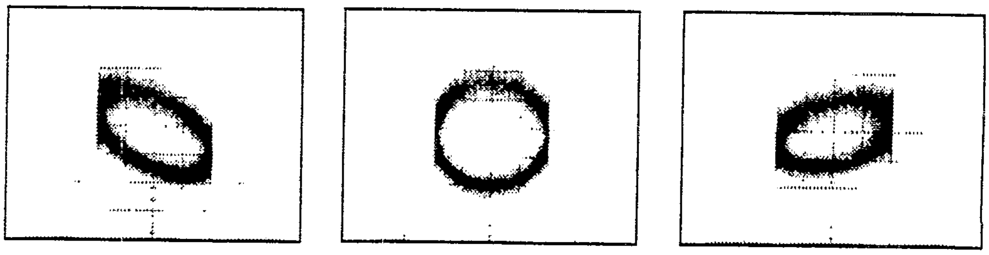


Fig. 4

Focus Gain Adjustment



Higher gain　　Optimum gain　　Lower gain

6. Tracking Servo Loop Gain Adjustment

● Objective	To optimize the tracking servo loop gain.		
● Symptom when out of adjustment	Playback does not start, during searches the actuator is noisy, or tracks are skipped.		
● Measurement Instrument Connections	See Fig. 5. [Settings] CH1 50mV/division X−Y mode CH2 20mV/division	● Player State ● Adjustment Location ● Disc	Test mode, play VR8151 (TRK GAN) YEDS−7

[Procedure]

1. Set the AF generator output to 1.2kHz and 2Vp−p.
2. Press the MANUAL/TRACK SEARCH FWD ▷▷ • ▷▷▯ key or REV ▯◁◁ • ◁◁ key to move the pickup to halfway across the disc (R=35mm), then press the DOLBY NR key, the PLAY/PAUSE ▷/▯▯ key twice in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR8151 (TRK GAN) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

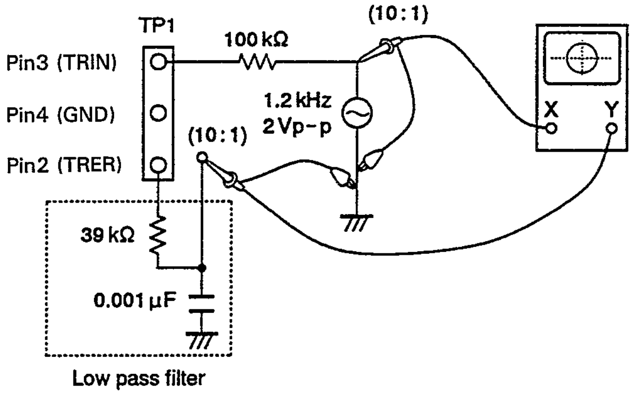
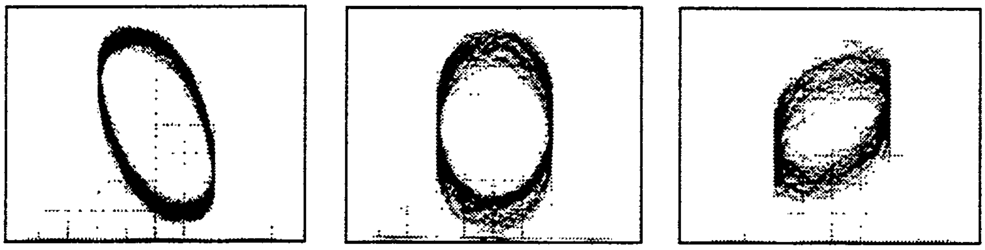


Fig. 5

Tracking Gain Adjustment



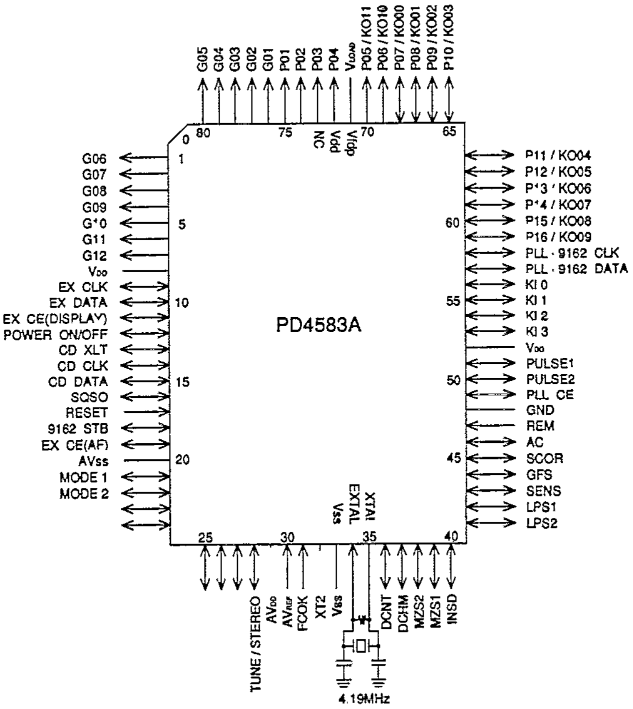
Higher gain　　Optimum gain　　Lower gain

7. IC INFORMATION

- *The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.*

■ PD4583A (IC1901 : DISPLAY ASSY)

- **System Control Micro-computer**
- Pin Assignment (Top View)


G05
G04
G03
G02
G01
P01
P02
P03
P04
V_{LOAD}
P05 / KO11
P06 / KO10
P07 / KO00
P08 / KO01
P09 / KO02
P10 / KO03
0
80
75
NC
Vdd
Vfdp
70
65
G06
G07
G08
G09
G10
G11
G12
V_{DD}
EX CLK
EX DATA
EX CE(DISPLAY)
POWER ON/OFF
CD XLT
CD CLK
CD DATA
SQSO
RESET
9162 STB
EX CE(AF)
AVss
MODE 1
MODE 2
1
5
10
15
20
PD4583A
60
55
50
45
P11 / KO04
P12 / KO05
P13 / KO06
P14 / KO07
P15 / KO08
P16 / KO09
PLL · 9162 CLK
PLL · 9162 DATA
KI 0
KI 1
KI 2
KI 3
V_{DD}
PULSE1
PULSE2
PLL CE
GND
REM
AC
SCOR
GFS
SENS
LPS1
LPS2
Vss
EXTAL
XTAL
25
30
35
40
TUNE / STEREO
AV_{DD}
AV_{REF}
FCOK
XT2
V_{SS}
DCNT
DCHM
MZS2
MZS1
INSD
4.19MHz

- Pin Function

No.	Name	Function	I/O	Description
1	FIP6	6G	P	FL grid
2	FIP5	7G		
3	FIP4	8G		
4	FIP3	9G		
5	FIP2	10G		
6	FIP1	11G		
7	FIP0	12G		
8	V_{DD}	V_{DD}	–	Connected to +5V.
9	$\overline{\text{SCK0}}$	EX CLK	N	Extension port serial clock output
10	SO0	EX DATA	N	Extension port serial data output
11	P25	EX CE (DISPLAY)	C	Extension port (display system) latch pulse
12	P24	POWER ON/OFF	C	POWER ON/OFF
13	P23	CD XLT	C	LSI control data latch pulse
14	$\overline{\text{SCK1}}$	CD CLK	C	LSI control data serial clock
15	SO1	CD DATA	C	LSI control data serial output
16	SI1	SQSO	I	Subcode Q data serial input
17	$\overline{\text{RESET}}$	–	–	Reset input
18	P74	9162 STB	N	9162 strobe output
19	P73	EX CE (AF)	N	Extension port (AF system) latch pulse
20	AVss	AVss	–	Connected to GND.
21	ANI7	MODE1	I	Tape1 mode SW input
22	ANI6	MODE2	I	Tape2 mode SW input
23	ANI5	–	A/D	Spectrum analyzer input
24	ANI4	–		
25	ANI3	–		
26	ANI2	–		
27	P11	–		
28	P10	TUNE/ STEREO	A/D	TUNE/STEREO status discrimination input
29	AV_{DD}	AV_{DD}	–	Connected to +5V.
30	AV_{REF}	AV_{REF}	–	
31	P04	FCOK	I	Focus OK input
32	XT2	–	O	Open
33	Vss	–	–	Connected to GND.
34	X1	–	I	Connected to Oscillator (4.19MHz).
35	X2	–	O	
36	P37	DCNT	I	Disc count pulse input
37	P36	DCHM	I	Disc selector home SW input
38	P35	MZS2	I	Magazine discrimination SW input
39	P34	MZS1		
40	P33	INSD	I	Slider inside SW input

No.	Name	Function	I/O	Description
41	P32	LPS2	I	Load position discrimination input
42	P31	LPS1		
43	P30	SENS	I	LSI operating status multi-mode input
44	P03	GFS	I	Frame/synch/lock input
45	INTP2	SCOR	I	Subcode synch SO + SI input
46	INTP1	AC	I	AC pulse input
47	INTP0	REM	I	Remote control signal input
48	IC	–	–	Connected to GND.
49	P72	PLL CE	N	PLL latch pulse
50	P71	PULSE2	I	Tape 2 reel pulse input
51	P70	PULSE1	I	Tape 1 reel pulse input
52	V_{DD}	–	–	Connected to +5V.
53	P127	–	I	Key scan input
54	P126	–		
55	P125	–		
56	P124	–		
57	P123	PLL 9162 DATA	P	PLL and 9162 serial data
58	P122	PLL 9162 CLK	P	PLL and 9162 clock
59	FIP27	P16/KO9	P	FL segment and key scan output
60	FIP26	P15/KO8	P	
61	FIP25	P14/KO7	P	
62	FIP24	P13/KO6	P	
63	FIP23	P12/KO5	P	
64	FIP22	P11/KO4	P	
65	FIP21	P10/KO3	P	
66	FIP20	P9/KO2	P	

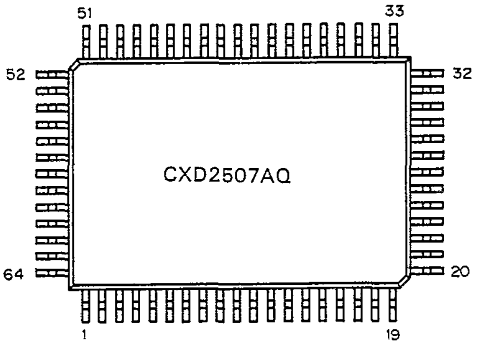
No.	Name	Function	I/O	Description
67	FIP19	P8/KO1	P	FL segment and key scan output
68	FIP18	P7/KO0	P	
69	FIP17	P6/KO10	P	
70	FIP16	P5/KO11	P	
71	V_{LOAD}	–	–	Connected to −30V.
72	FIP15	P4	P	FL segment
73	FIP14	P3	P	
74	FIP13	P2	P	
75	FIP12	P1	P	
76	FIP11	1G	P	FL grid
77	FIP10	2G	P	
78	FIP9	3G	P	
79	FIP8	4G	P	
80	FIP7	5G	P	

Note)
I : Input
A/D : Analog Input
O : Cmos Output
N : Nch Open Drain Output
P : Pch Open Drain Output

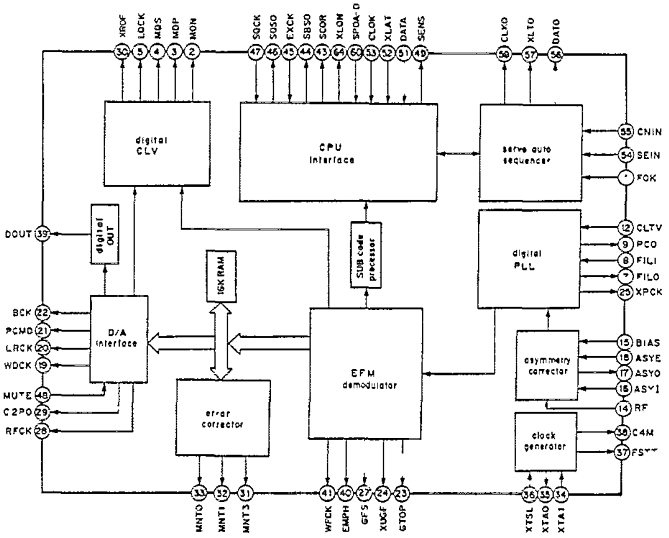
■ CXD2507AQ (IC8301: AF CD ASSY)

● EFM Demodulator IC

● Pin Assignment (Top View)


51
33
52
32
CXD2507AQ
64
20
1
19

● Block Diagram


XROF
LOCK
MDS
MDP
MON
SQCK
SQSO
EXCK
SBSO
SCOR
XLON
SPOA-D
CLOK
XLAT
DATA
SENS
CLKO
XLTO
DATO
30
5
4
3
2
47
46
45
44
43
64
60
53
52
51
49
59
57
56
digital CLV
CPU interface
servo auto sequencer
55 CNIN
54 SEIN
FOK
digital OUT
DOUT 39
16K RAM
SUB code processor
digital PLL
12 CLTV
9 PCO
8 FILI
7 FILO
25 XPCK
BCK 22
PCMD 21
LRCK 20
WDCK 19
D/A interface
EFM demodulator
asymmetry corrector
15 BIAS
18 ASYE
17 ASYO
16 ASYI
14 RF
MUTE 48
C2PO 29
RFCK 28
error corrector
clock generator
38 C4M
37 FS
33 MNT0
32 MNT1
31 MNT3
41 WFCK
40 EMPH
27 GFS
24 XUGF
23 GTOP
36 XTSL
35 XTAO
34 XTAI

● Pin Function

Pin No.	Symbol	I/O		Function
1	FOK	I	–	Focus OK input pin. Used for SENS output and servo auto sequence.
2	MON	O	1, 0	ON/OFF control output for spindle motor.
3	MDP	O	1, Z, 0	Spindle motor servo control.
4	MDS	O	1, Z, 0	Spindle motor servo control.
5	LOCK	O	1, 0	High output GFS is sampled at 460 Hz and that is High; Low output when GFS is sampled 8 times and that is Low.
6	TEST	I	–	Test pin, normally GND.
7	FILO	O	Analog	Filter output for master PLL .(slave=digital PLL)
8	FILI	I	–	Master PLL filter input.
9	PCO	O	1, Z, 0	Master PLL charge pump output.
10	Vss	–	–	GND
11	AVss	–	–	Analog GND
12	CLTV	I	–	Master VCO control voltage input.
13	AVDD	–	–	Analog power supply. (+5V)
14	RF	I	–	EFM signal input.
15	BIAS	I	–	Asymmetry circuit constant current input.
16	ASYI	I	–	Asymmetry comparator voltage input.
17	ASYO	O	1, 0	EFM full-swing output. (Low=Vss, High=VDD)
18	ASYE	I	–	"L": Asymmetry circuit OFF, "H": Asymmetry circuit ON.
19	WDCK	O	1, 0	D/A interface. Word clock f=2 Fs.
20	LRCK	O	1, 0	D/A interface. LR clock f=Fs.
21	PCMD	O	1, 0	D/A interface. Serial data . (2's COMP, MSB fast)
22	BCK	O	1, 0	D/A interface. Bit clock.
23	GTOP	O	1, 0	GTOP output.
24	XUGF	O	1, 0	XUGF output.
25	XPCK	O	1, 0	XPLCK output.

Pin No.	Symbol	I/O		Function
26	VDD	–	–	Power supply . (+5V)
27	GFS	O	1, 0	GFS output.
28	RFCK	O	1, 0	RFCK output.
29	C2PO	O	1, 0	C2PO output.
30	XROF	O	1, 0	XRAOF output.
31	MNT3	O	1, 0	MNT3 output.
32	MNT1	O	1, 0	MNT1 output.
33	MNT0	O	1, 0	MNT0 output.
34	XTAI	I	–	Crystal oscillator circuit input. 16.9344 MHz or 33.8688 MHz input.
35	XTAO	O	1, 0	16.9344 MHz crystal oscillation circuit output.
36	XTSL	I	–	Crystal selection input. Low for 16.9344 MHz crystal; High for 33.8688 MHz crystal.
37	FSTT	O	1, 0	2/3 frequency divider input of Pins 34 and 35.
38	C4M	O	1, 0	4.2336 MHz output.
39	DOUT	O	1, 0	Digital Out output.
40	EMPH	O	1, 0	Playback disc emphasis mode output. (Low for no emphasis applied; High for emphasis applied)
41	WFCK	O	1, 0	WFCK output.
42	Vss	–	–	GND
43	SCOR	O	1, 0	Subcode sync output. (High for subcode sync S0 or S1 detected)
44	SBSO	O	1, 0	Sub P to W serial output.
45	EXCK	I	–	SBSO readout clock input.
46	SQSO	O	1, 0	Sub Q 80-bit serial output.
47	SQCK	I	–	SQSO readout clock input.
48	MUTE	I	–	"H": Mute, "L": Release.
49	SENS	O	1, 0	SENS output .(Output to CPU)
50	XRST	I	–	System reset .(Low for reset)
51	DATA	I	–	Serial data input from CPU.
52	XLAT	I	–	Latch input from CPU. Latches serial data at falling edge.
53	CLOK	I	–	Serial data transfer clock input from CPU.
54	SEIN	I	–	Sense input from SSP.
55	CNIN	I	–	Track jump number count signal input.
56	DATO	O	1, 0	Serial data output to SSP.
57	XLTO	O	1, 0	Serial data latch output to SSP. Latches at falling edge.
58	VDD	–	–	Power supply . (+5V)
59	CLKO	O	1, 0	Serial data transfer clock output to SSP.
60	SPOA	I	–	Microprocessor extension interface. (input A)
61	SPOB	I	–	Microprocessor extension interface. (input B)
62	SPOC	I	–	Microprocessor extension interface. (input C)
63	SPOD	I	–	Microprocessor extension interface. (input D)
64	XLON	O	1, 0	Microprocessor extension interface. (output)

8. DISASSEMBLY

■ CD MECHA ASSY DIAGNOSIS AND REPLACEMENT

1. Remove the cover.
2. Remove the nylon rivet Ⓔ between the front panel and AF CD assy.
3. Remove the 3 screws between the front panel and the chassis.
   L/R sides: Ⓐ ×2
   Bottom side: Ⓑ ×1
4. Remove the lead wire from the cassette mecha assy from the chassis.
   Screw: Ⓒ ×1
5. Remove the front panel from the chassis (watching out for the claw on the left and right), and open the side of the AF CD assy. (Refer to Fig. 1)

NOTE:
Do not remove the rear panel and AF CD assy at this time.

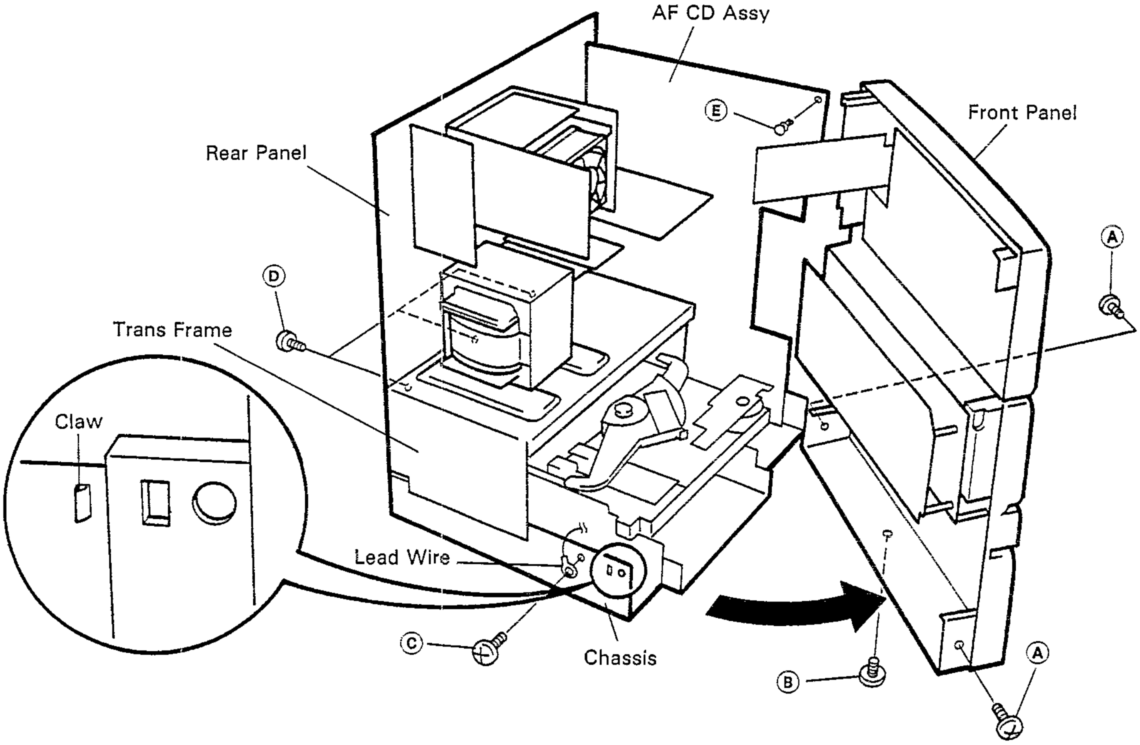


Fig. 1

Under these conditions, most of the PCB diagnosis and parts replacement can be performed.

■ REMOVAL OF AF CD ASSY

1. Under the conditions of the previous paragraph, remove the rear panel and AF CD assy.
   (Do not separate the rear panel and AF CD assy.)

   Between rear panel and trans frame.
   Screw: Ⓓ ×3

9. FOR XR–P5500M/KC, XR–P4500M/KU AND KC TYPES

CONTRAST OF MISCELLANEOUS PARTS

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

$560\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ ························ RD1/8PM $\boxed{5}\,\boxed{6}\,\boxed{1}$ J
$47k\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ ························ RD1/4PS $\boxed{4}\,\boxed{7}\,\boxed{3}$ J
$0.5\Omega \rightarrow 0R5$ ·· RN2H $\boxed{0}\,\boxed{R}\,\boxed{5}$ K
$1\Omega \rightarrow 010$ ·· RS1P $\boxed{0}\,\boxed{1}\,\boxed{0}$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62k\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ ················· RM1/4PC $\boxed{5}\,\boxed{6}\,\boxed{2}\,\boxed{1}$ F

XR–P5500M/KC, XR–P4500M/KU, KC and XR–P5500M/KU have the same construction except for the following :

Mark	Symbol & Description	Part No.				Remarks
		XR–P5500M/KU	XR–P5500M/KC	XR–P4500M/KU	XR–P4500M/KC	
	AF assy	AWK7108	AWK7108	AWK7106	AWK7106	
	AF CD assy	AWZ7544	AWZ7544	AWZ7542	AWZ7542	
	VR assy	AWZ7551	AWZ7551	AWZ7549	AWZ7549	
NSP	HEADPHONE assy	AWZ7555	AWZ7555	AWZ7554	AWZ7554	*1
NSP	COMPLEX assy	AWM7147	AWM7147	AWM7137	AWM7137	
	PRIMARY assy	AWZ7535	AWZ7535	AWZ7532	AWZ7532	
	CASSETTE MOD. B	EXK2435	EXK2415	EXK2435	EXK2415	
⚠	T8005 Power transformer	ATS7039	ATS7039	ATS7068	ATS7068	
⚠	FU1 Fuse (6.3A/125V)	AEK–309	AEK–309	Not used	Not used	
⚠	FU1 Fuse (5A/125V)	Not used	Not used	AEK–308	AEK–308	
	Front panel	AMB7213	AMB7213	AMB7155	AMB7155	
	Rear panel	ANC7143	ANC7144	ANC7138	ANC7139	
	Bonnet case	ANE7045	ANE7045	ANE7044	ANE7044	
	Packing case	AHD7081	AHD7081	AHD7079	AHD7079	
	Operating instructions (English)	ARB7021	Not used	ARB7021	Not used	
	Operating instructions (English, French)	Not used	ARE7020	Not used	ARE7020	
	65 label	ORW1069	Not used	ORW1069	Not used	

Note:

**1 : Although AWZ7554 and AWZ7555 are different in part number, they have the same service parts.*

AF CD ASSY

AWZ7542 and AWZ7544 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7544	AWZ7542	
⚠	C1001, C1002 (4700/71)	ACH1249	Not used	
⚠	C1001, C1002 (4700/63)	Not used	ACH7007	
	R1224	RS1LMF472J	RS1LMF272J	
	R2116	RS1/10S152J	RS1/10S473J	

VR ASSY

AWZ7549 and AWZ7551 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7551	AWZ7549	
	R1505, R1506	RS1/10S104J	RS1/10S473J	

PRIMARY ASSY

AWZ7532 and AWZ7535 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7535	AWZ7532	
	L1101	ATF1136	ATF–151	

CASSETTE MOD. B

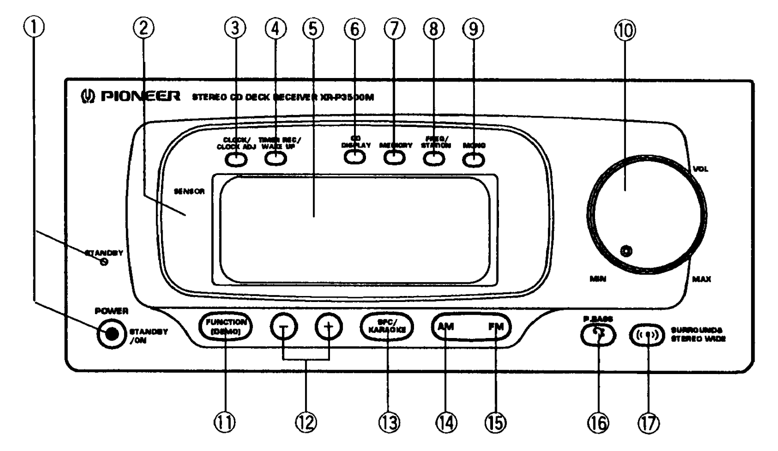
EXK2415 and EXK2435 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		EXK2435	EXK2415	
	Cassette mecha unit	EXA1408	EXA1407	*2

Note:

**2 : Although EXA1407 and EXA1408 are different in part number, they consist of the same components.*

10. PANEL FACILITIES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PIONEER STEREO CD DECK RECEIVER XR-P3500M
SENSOR
STANDBY
POWER
STANDBY /ON
CLOCK/ CLOCK ADJ
TIMER REC/ WAKE UP
CD DISPLAY
MEMORY
FREQ/ STATION
MONO
VOL
MIN
MAX
FUNCTION (DEMO)
SFC/ KARAOKE
AM
FM
P.BASS
SURROUND& STEREO WIDE

*Illustration shows model XR-P3500M

RECEIVER

① **POWER STANDBY/ON switch and STANDBY indicator**

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. (The STANDBY indicator lights.)

② **Remote sensor**

③ **CLOCK/CLOCK ADJ button**

④ **TIMER REC/WAKE-UP button**

⑤ **Display**

⑥ **CD DISPLAY button**

⑦ **MEMORY button**

⑧ **FREQ/STATION button**

⑨ **MONO button**

⑩ **VOLUME control**

⑪ **FUNCTION (*DEMO) button and indicators**

Each time this button is pressed, the function changes in the following sequence (The selected function is displayed in the display window.):

$$\begin{tikzcd}\text{TUNER} \arrow[r] & \text{TAPE} \arrow[r] & \text{CD} \arrow[dl, bend left] \\ & \text{VIDEO/AUX} \arrow[ul, bend left] & \end{tikzcd}$$

⑫ **⊖,⊕ buttons**

⑬ **SFC (Sound Field Control)/KARAOKE button**

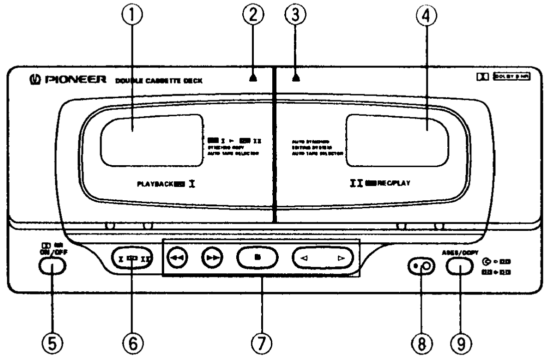
⑭ **AM button**

⑮ **FM button**

⑯ **P. BASS button**

⑰ **U.S.model : STEREO WIDE button**
U.K., Australian and Multivoltage models : SURROUND & STEREO WIDE button

CASSETTE DECK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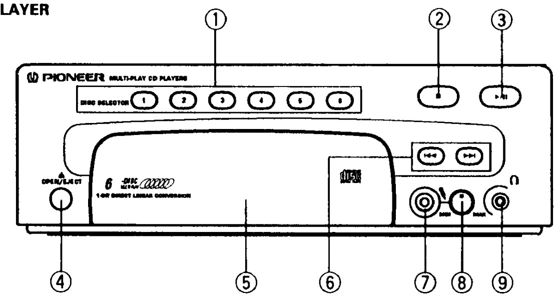
PIONEER DOUBLE CASSETTE DECK
PLAYBACK I
II REC/PLAY
ASES/COPY

MULTI-PLAY CD PLAYER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PIONEER MULTI-PLAY CD PLAYERS
DISC SELECTOR
OPEN/EJECT

CASSETTE DECK

① **TAPE I cassette door**

② **TAPE I EJECT section (≜)**

③ **TAPE II EJECT section (≜)**

④ **TAPE II cassette door**

⑤ **DOLBY* NR ON/OFF button**

Each time this button is pressed, DOLBY NR system turns ON and OFF.

⑥ **TAPE I/II selector button**

⑦ **TAPE operation buttons (Play ◄ ►, Stop ■, Fast ◄◄ ►►)**

⑧ **Rec pause button (●)**

⑨ **ASES (Auto Synchro Editing System)/ COPY button**

■ **Auto Function**

This model is equipped with an "Auto Function" operation, so when the switch for PLAY/PAUSE, DISC SELECTOR 1-6, RND, TAPE I/II, PLAY (tape), or Band (FM,AM) is pressed, the function switches automatically. Use the FUNCTION button to select the component connected to the VIDEO/ AUX IN jacks, since Auto Function is not effective for this.

NOTE:
The function cannot be switched during recording and tape copying.

MULTI-PLAY CD PLAYERS

① **DISC SELECTOR buttons (1~6)**

② **Stop button (■)**

③ **Play/Pause button (►/II)**

④ **OPEN/EJECT button**

⑤ **Magazine slot door**

⑥ **Manual/Track search buttons (I◄◄, ►►I)**

⑦ **Microphone jack**

⑧ **Mic level control**

⑨ **Headphones jack**

*

- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.*

11. SPECIFICATIONS

STEREO MULTI-PLAY CD CASSETTE DECK RECEIVER:
XR- P5500M / XR-P4500M / XR-P3500M
Amplifier section

<XR-P5500M>

Continuous Average Power Output is 100W Watts* per channel, min., at 8 ohms from 60 Hertz to 15,000 Hertz with no more than 1 % total harmonic distortion.**

<XR-P4500M>

Continuous Power Output (RMS) ··· 100 W +100W
(1 kHz, T.H.D.10%, 8 Ω)
Peak Music Power ··· 1,400W

(U.S. model)

Continuous Average Power Output is 70 Watts* per channel, min., at 8 ohms from 60 Hertz to 20,000 Hertz with no more than 1 % total harmonic distortion.**

<XR-P3500M>

Continuous Power Output (RMS) ··· 50 W+ 50W
(1 kHz, T.H.D. 10%, 8 Ω)
Peak Music Power ··· 750W
Continuous Power Output (DIN) ··· 36W+36W
(1kHz, T.H.D.1 % 8Ω)
Music Power (DIN) ··· 180W

FM/AM tuner section
FM tuner section

Frequency Range ··· 87.5 MHz to 108 MHz
Antenna Input ··· 75Ω unbalanced

AM tuner Section

Frequency Range
With 10 kHz step ··· 530 kHz to 1,700 kHz
With 9 kHz step ··· 531 kHz to 1,602 kHz

CD section

Type ··· Compact disc digital audio system
Wow and Flutter ··· Limit of measurement
(±0.001 %W.PEAK) or less (EIAJ)

Cassette deck section

Systems ··· 4 track,2-channel stereo
Heads ··· Recording/playback head x 1
playback head x 1
Erasing head x 1
Motor ··· DC servo motor x 1
Tape type ··· TYPE I (Normal) tape/
TYPE II (HIGH/CrO_2)tape

Miscellaneous

Power Requirements
U.K. model ··· AC 230 V, 50/60 Hz
European model ··· AC 220-230V, 50/60Hz
Australian model ··· AC 240 V, 50/60 Hz
U.S. model ··· AC 120 V, 60 Hz
Multi-voltage models
  Flat blade 2-pin AC plug model ··· AC 110-115/120-127/
  220-230/240V(switchable), 50/60Hz
  Round 2-pin AC plug model ··· AC 110-115/120/
  220-230/240V(switchable), 50/60Hz

Power Consumption
  XR-P3500M ··· 276W
  XR-P4500M
    U.S. model ··· 155W
    Australian and Multi-voltage models ··· 460W
  XR-P5500M ··· 200W
Dimensions ··· 260(W) x 310(H) x 309(D) mm
10-4/16(W) x 12-3/16(H) x 12-3/16(D) in.
Weight (without package)
U.K.and European models
  (XR-P3500M) ··· 7.4kg
Australian models
  (XR-P3500M) ··· 7.4kg
  (XR-P4500M) ··· 8.9kg
Multi-voltage models
  (XR-P3500M) ··· 7.4kg
  (XR-P4500M) ··· 8.9kg
U.S. models
  (XR-P4500M) ··· 8.9kg(19lb 10oz)
  (XR-P5500M) ··· 9.4kg(20lb 12oz)

Accessories
<Multi-play CD cassette deck receiver>

Operating instructions ··· 1
Remote control unit ··· 1
AAA/R03 dry cell batteries ··· 2
FM T-type antenna ··· 1
AM Loop antenna ··· 1

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.
** Measured by audio spectrum analyzer

NOTE:
Specifications and design subject to possible modification without notice due to improvement.